

BASF Corporation

BASF

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

November 30, 1995

Mr. Lance R. Richman, P.G.
Emergency and Remedial Response Division
U.S. Environmental Protection Agency - Region 2
290 Broadway, 19th Floor
New York, NY 10007-1866

**RE: Diamond Alkali Superfund Site, Operable Unit 2
Request for Information**

Dear Mr. Richman:

Enclosed is BASF Corporation's response to the Request for Information by USEPA dated October 6, 1995 as it relates to the former BASF facility located at 50 Central Avenue, Kearny, Hudson County, NJ 07032. USEPA's October 6 Request for Information is the second such request received by BASF. BASF made an initial response to the 1993 Request on January 28, 1994.

BASF reserves the right to amend or supplement its response if additional relevant information is discovered. Should you have any questions concerning BASF's response, please contact the undersigned.

Very truly yours,

Nancy Lake Martin

Nancy Lake Martin
Senior Attorney

cc: Ms. Amelia Wagner
Assistant Regional Counsel
Office of Regional Counsel
17th Floor

**DIAMOND ALKALI SUPERFUND SITE
OPERABLE UNIT 2
104(e) INFORMATION REQUEST**

RESPONSE OF BASF CORPORATION

1. Describe in detail, by period of operation, all the ways that process waste water, including sludge, and storm water was disposed of or managed by BASF from 1996 (sic) to the present including, but not limited to:

See BASF's Responses to Request for Information, Questions 4 and 6, dated January 28, 1994, which describe in detail the manufacturing operations and the waste water discharges of sanitary and/or industrial waste at the Kearny, New Jersey facility.

a. when the waste water pre-treatment program was initiated by BASF.

BASF operated the Kearny, New Jersey facility from 1966 until September 1990. In approximately 1973, the palanil dyestuffs plant was constructed. It was at this point that a primary waste water treatment plant was built to handle the process waste water from the palanil process (i.e., pH, solids and color). Eventually, all process waste water and all storm water was sent to the on-site waste water treatment plant prior to being discharged to the Kearny POTW.

b. how waste waters and potentially contaminated storm waters were managed by BASF prior to the initiation of the pre-treatment program.

Prior to construction of and connection to the on-site waste water treatment plant, process waste water from the Basacryl plant was first placed in the Basacryl pit where it was air sparged and neutralized before being discharged to the Kearny POTW. Process waste water from the production of plasticizers was sent to a skimmer pit (to remove organics) before being discharged to the POTW. Prior to December 2, 1988 (see response to Question 1.d. below), storm water was first sent to an underflow/overflow outfall pit where organics were removed, before being discharged to Newark Bay.

c. the composition of waste waters from BASF's various operations.

The composition of process waste waters varied over time depending on the operations which were running. Production of Basacryl dyestuffs was begun in July, 1966. A dispersions plant was also up and running

beginning in 1966. In late 1971, start-up of the phthalic anhydride and dioctylphthalate plants began. Production of palanil dyes began in 1973. Dispersions operations ceased in February, 1976. The Basacryl dye plant was shut down in March, 1978. Palanil dye operations were suspended in July, 1981. Batch plasticizer operations began in October, 1981. In mid 1986, a facility to flake molten phthalic anhydride was brought on line.

See BASF's Responses to Request for Information, Questions 4 and 6, dated January 28, 1994, which describe in detail the phthalic anhydride, plasticizer (continuous ester) and batch ester processes and the related discharge of process waste water.

The Basacryl plant area manufactured cationic acrylic dyes (which were water based or solvent based) and water based dispersions for methacrylate and acrylate chlorides. Raw materials and products involved in these processes are provided in Exhibit A.

d. when BASF received its permit for the storm water outfall.

The Kearny facility was issued NJPDES storm water (DSW) permit #NJ0001112 on November 30, 1979. From this date until December 2, 1988, storm water was discharged to Newark Bay. Beginning in December, 1988 and continuing until February 2, 1995, storm water was discharged to the Kearny POTW. At the request of NJDEP, effective February 2, 1995, BASF applied for and was issued another NJPDES DSW permit for discharge of storm water to Newark Bay.

e. where and how storm water was disposed of prior to the receipt of the permit for the outfall.

BASF has not developed any specific information on where and how storm water was disposed prior to November 30, 1979.

f. how potentially contaminated storm water was managed.

See BASF's Responses to Request for Information, Question 6, dated January 28, 1994, which describes in detail the waste water discharges of sanitary and/or industrial waste at the Kearny, New Jersey facility. See also response to Question 1.b. above.

g. how waste water or potentially contaminated storm water was stored on the property.

See BASF's Responses to Request for Information, Question 6, dated January 28, 1994, which describes in detail the waste water discharges of

sanitary and/or industrial waste at the Kearny, New Jersey facility. See also response to Question 1.b. above.

h. which waste waters were incinerated?

The Kearny incinerator was constructed in 1971 to be used in conjunction with phthalic anhydride operations. The spent process vent gas was sent to a proprietary co-current wet scrubber for cleanup prior to discharge. The off-gas scrubbing process produced scrubber water which, although not hazardous, was continuously fed to the incinerator for treatment. The scrubber water can be characterized as an organic acid/water solution. Additional characterization is provided in Exhibit B.

In addition, a waste stream referred to as PAA distillates was incinerated. This stream consisted of a combination of distillation residues and light ends from the purification of phthalic anhydride. It was a combination of two listed waste streams, K093 and K094.

i. what combination of waste waters were incinerated.

The scrubber water was continuously fed to the incinerator, whereas the PAA distillates consisted of an intermittent feed stream which was burned concurrently with the scrubber water.

Include in your response a flowchart detailing the generation and final disposition of all waste water produced by BASF from 1966 to the present.

See Exhibits A and C to BASF's Responses to Request for Information dated January 28, 1994.

2. Describe the use and operation of any incinerators at the property including, but not limited to, when the incinerator was constructed, the chemical composition of the materials incinerated, the volume of materials incinerated, how many years the incinerator was operated, and the feed rates of the incinerator. Provide in your response documents relating to the use or operation of the incinerator, including the results of any trial burns conducted on the incinerator and stack test sampling.

See response to Question 1.a. above and Exhibit B. See also Exhibit C. The incinerator was used until the plant closed in September 1990.

3. Please describe in detail which BASF process generated the process waste water that was incinerated, how often this process waste water was incinerated, and with what (if anything) the process waste water was combined with before incineration.

See response to Question 1.h. above.

4. Describe in detail the transaction between BASF and United Cork Company for the property at 50 Central Avenue, Kearny, New Jersey, including but not limited (sic), the nature of the transaction (merger, asset purchase, etc.), the year of the transaction, any agreements regarding the assumptions or acquisition of liabilities, any guarantees, and any investigations performed by BASF regarding the property.

On January 4, 1964, BASF AG the physical assets of United Cork Company. In 1966, the name changed to Badische Products Corporation.

5. Describe the manufacturing processes of United Cork Company conducted on the property including, but not limited to, the equipment used in the processes, all raw materials used, the volume of raw material used, and all substances produced or that were a by-product of operations of United Cork.

BASF has no information on the manufacturing processes of United Cork Company.

6. Describe the process used by United Cork to clean and remove the lignin in the manufacture of cork products.

BASF has no information on the manufacturing processes of United Cork Company.

7. Describe in detail, how process waste waters, storm water and sanitary waters were disposed of or managed by United Cork Company at the property.

BASF has no information on the manufacturing processes of United Cork Company.

8. Describe in detail the chemical processes used at the facility for all operations including the palanil dyestuffs plant. For every process, include information regarding the following:

a. the equipment used in the process;

- b. the volume of each raw material used;
 - c. the chemical composition of the raw material;
 - d. the purity of the raw material;
 - e. the raw materials combined in each reaction;
 - f. how long each reaction was allowed to run;
 - g. the temperature of each reaction;
 - h. the purity of the final product;
 - i. characteristics of process wastes and waste water associated with each process, as well as the final deposition of process wastes and waste water; and
 - j. a map of the facility indicating where each process occurred.

See Exhibit D.

See BASF's Responses to Request for Information, Questions 4 and 6, dated January 28, 1994, which describe in detail the phthalic anhydride, plasticizer (continuous ester) and batch ester processes and the related discharge of process waste water. See also response to Question 1.c. above.

9. Provide all documents relating to the results of any investigations conducted at the property (whether mandated by federal, state, or local agencies or conducted voluntarily by BASF) including, but not limited to, analytical results of ground water, surface water, ambient air, and soil or sediment sampling plans, and a description of any remedial actions taken by BASF as a result of the investigations.

The investigation activity at the Kearny site has been conducted pursuant to the requirements of ECRA. ECRA was triggered on June 6, 1990. A Site Evaluation Submission (SES) was submitted to NJDEP on August 3, 1990. ECRA Case No. 90537 was assigned to the site. BASF has since collected soil, sediment and ground water samples during three phases of hydrogeologic investigation. The majority of the data is contained in the Phase I and Phase II Data Presentation Reports submitted to NJDEP in November, 1991 and August, 1993, respectively. NJDEP has reviewed and formally responded to the

submittals. A compilation of the analytical results from Phase I and Phase II is presented in Exhibit E.

Investigation and site characterization are substantially completed with some minor soil delineation planned. A remedial action work plan will be developed for the site during 1996.

BASF received closure approval and delisting of the former RCRA activities at the site from NJDEP on December 16, 1991.

Decommissioning of the facility was completed in December, 1992. A Decommissioning Report, describing the cleaning and disposal activities conducted was submitted to NJDEP in August, 1993. The complete facility dismantling was completed in October, 1995. The site exists as a secure, 27-acre parcel with no buildings except the front guard house.

10. To the extent this information was not provided in response to question number 9, please provide information on the status of the ECRA review, including, but not limited to, analytical results of any sampling, sampling plans, and any remedial actions taken by BASF as a result of the investigation.

See response to Question 9.

11. Provide the name, address, telephone number, title and occupation of the person(s) answering this "Request for Information" and state whether such person(s) has personal knowledge of the responses. In addition, identify each person who assisted in any way in responding to the "Request for Information" and specify the question to which each person assisted in responding.

BASF's response was prepared by corporate counsel, Nancy Lake Martin, BASF Corporation, 3000 Continental Drive - North, Mount Olive, New Jersey 07828, in consultation with the following individuals:

Question 1.a. - 1.b.

Joe Nalio
Director Ecology/Safety Programs
BASF Corporation
3000 Continental Drive - North
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Question 1.a. **Ed Madzy**
Director, Ecology/Safety Site
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Question 1.c. **Frank Calabrese**
Production Manager, Chemicals (NCO)
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Question 1.c. **Hans Vahlenkamp**
Product Stewardship Services Mgr.
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Question 1.h. - 1.i., 2, 3 **Teressa Szelest**
Team Leader, Air
Ecology and Safety
BASF Corporation
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Question 9 **Brian Diepeveen**
Team Member, Remediation
Investigations
BASF Corporation
3000 Continental Drive - North
Mount Olive, NJ 07828

CERTIFICATION OF ANSWERS TO REQUEST FOR INFORMATION

State of New Jersey

County of Morris :

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document (response to EPA Request for Information) and all documents submitted herewith, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete, and that all documents submitted herewith are complete and authentic unless otherwise indicated. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I am also aware that my company is under a continuing obligation to supplement its response to EPA's Request for Information if any additional information relevant to the matters addressed in EPA's Request for Information or the company's response thereto should become known or available to the company.

Nancy Lake Martin
NAME (print or type)

Senior Attorney
TITLE (print or type)

Nancy Lake Martin
SIGNATURE

Sworn to before me this 30th day of NOVEMBER, 1995

Dawn S. Balut
Notary Public

Dawn S. Balut
Notary Public of New Jersey
My Commission Expires May 16, 2000

Exhibit A

BASF CORPORATION
Kearny, New Jersey

BASACRYL PLANT

Raw Materials and Products

A AMINO ACETANILIDE	DIHYDROBIBENZOTETR IRON COMPLEX
ACETIC ACID GLACIAL	DIOXETHYL-META-CHLORO-ANILINE
ACETOXY ETHYL ETHYL ANILINE	DISINFECTION SOLUTION 73 U
ACETOXYLINE	DISPERSING AGENT SS EXTRA PDR.
ACRIDYLIC ACID	DISPERSING AGENT SSP PDR.
ALBIGEN A	DRY ICE
ALLYLNITRILINE	EKTASOLVE DB
ALPHA AMINO ANTHRAQUINONE	EMULPHOR ON 870
ALUMINUM PDR ST 30	ETHYL ANILINE ESTER @ 100%
AMINO-PHE-HYD-ANTHRAQUINONE	ETHYL ANILINE ESTER
ANTHRANILIC ACID DRY	ETHYL NITRILINE
AQUA AMMONIA	ETHYLENE GLYCOL
ASTRA N FUCHSIN CONC.	ETINGAL A
BASOLON B PDR.	FOAMMASTER V
BASOPHEN RBD = TENSACTOL A	FORMIC ACID
BASOPHOR FJ	GELB PYRIDONE @ 100%
BASOPHOR OU	GELB PYRIDONE
BASOTOL	GLYCERINE
BASOWET BX DRY	HEXANDIOL-1.6
BENZALDEHYDE	HYDRAZON
BENZIMID	HYDROCHLORIC ACID 31%
BETA NAPHTOL	HYDROGEN PEROXIDE 35%
BOHRMITTEL HOECHST	IGEPON T-77
BORIC 100%	INDANTHRENE BLUE RS
BROMINE	INDANTHRENE BLUE RS GROUND
BUTYL-CYANOETHYL-ANILINE	INDIGO PU POWDER KN (DRUMS)
CHLORANIL	INDIGO 75 POWDER @ 100% (BINS)
CHLORINE	ISOBUTANOL
CHLOROSULFONIC ACID	LIGNOSOL FTA
CHROMOXIDE EX WET	LIPAMIN OK
CYANO ETH OXETH ANIL BENZOATE	LOMAR PW
CYANO ETHYL ETHYL ANILINE	MANGANESE DIOXIDE
CYANO ETHYL ETHYL M TOLUIDINE	METHANOL
CYETH ETHCARB OXETH ANILINE R	METHYL CARBITOL
DEKOL N	METHYL PYROLIDONE SOLN.
DI PROPYLENE GLYCOL	METHYL QUINOLONE
DIBENZANTHRONE DRY	MONO ETHYLENE GLYCOLDIACETATE
DICHINYL C	M-CRESOL
M-NITROANILINE	RABTEX OIL
N N ACETOXY ETHYL AMINO A A	REAX 85 A
NEKAL 73 U	SELLOGEN H.R.
NITRA ACID AMIDE	SODIUM ACETATE
NITRO DIAZOXYL ACID	SODIUM BICARBONATE
NITROFORMALID PDR. @ 100%	SODIUM BISULFITE
NITROSYL SULFURIC ACID 40%	SODIUM BROMIDE
N-DIMETHYL ANILINE	SODIUM CARBONATE
N-DI-ETHYL ANILINE	SODIUM CHLORIDE

N-ETHYL-O-TOLUIDINE	SODIUM CYANIDE
N-MONO METHYL ANILINE	SODIUM FORMATE
OXYL AMID MOIST @ 100%	SODIUM HYDROSULFITE
OCTYLAVID PST	SODIUM HYDROXID 50% SOLN. 100%
OLEUM 24%	SODIUM HYPOCHLORITE
OXETHYLNITRILINE @ 100%	SODIUM NITRITE CRYST.
OXETHYLNITRILINE	SODIUM NITRITE SOLN @ 100%
OXY ETHYL ETHYL ANILINE	SODIUM SULFATE
OXYANTHRAQUINONE MIX	SODIUM SULFITE ANHYDROUS
OXYQUINALDINE CARBOXYLIC ACID	SORBITOL LIQUID
PARA CHLORO META CRESOL	SOYA LECITHIN CONC. W
PARA CRESOL	SULFAMIC ACID
PARA FORMALDEHYDE	SULFUR MILLED
PARA NITRO ANILINE	SULFURIC ACID 93-98%
PARA NITROANILINE O METHYL SULFONE	SULFURIC ACID 98%
PYRIDINE	SURFYNOL 104H
PHENOL CRYST 100%	TAMOL NNOK
PHOSPHORIC ACID 83-85	TAMOL NNOK SA
PHTHALIC ACID ANHYDRATE FLAKE	TAMOL SN
PHTHALIC ACID ANHYDRIDE = PAA	TETRONIC 1504
PLURACOL E-400	TETRONIC 904
PLURACOL E-600	TRIBUTYL PHOSPHATE
POTASSIUM CARBONATE	UREA
POTASSIUM HYDROXIDE	ZEWA POWDER MGF
PROPIONIC ACID	2 AMINO 5 NITRO BENZONITRILE
PROPYLENE GLYCOL	2 AMINO 5.6 DICHLORO BENZOTHIAZOLE
2 AMINO 6 NITRO BENZO THIAZOLE	2.6 DICHLORO 4 NITROANILINE
2 ANISID W METHAN AC PST (R)	2.6-DIBROMO-P-NITROANILINE
2-AMINOBENZONITRIL	3 ETHOXY PROPYLAMINE
2-AMINO-5-NITROBENZONITRIL	3-ETHYL AMINO P CRESOL
2-CHLORO-4-NITROANILINE	3-METHOXY PROPYLAMINE
2-CHLORO-4-NITRO-6-BROMO ANILINE	3-(BIS ACETOXYETHYL) AMINO 4 MAA
2.4 DINITRO 6 BROMO ANILINE	5 NITRO ANTHRANILIC A THIOAMID
2.5 DICHLOROSULFANILIC ACID	

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TABLE 4-1

CHEMICAL MAKEUP AND PROPERTIES OF BASF INCINERATOR FEEDSTREAMS

Feedstream Name	Nominal Feed Rate	Chemical Composition	Other Physical Properties
Scrubber Water	4000 lbs/hr Continuous	Phthalic Acid 5-8% Misc. Organic acids 25-40%, principally maleic acid Chlorine <0.1% Sulfur <0.01% Ash 0.03% Water & NH ₃ 50-70%	Aqueous Stream (Non-Hazardous) Temp. 40-45°C (liq) Sp. Gr. 1.10-1.15 pH 3-5 Viscosity 1.0 cp @ 50°C
PAA Distillates	400 lbs/hr Intermittent	Phthalic Anhydride 60% Maleic Anhydride 5-10% Misc. Organic Acids and Anhydrides 16-26% Chlorine <0.1% Sulfur 0.1% Ash <0.35%	Organic Waste Stream Temp. 135°C (liq) Sp. Gr. 1.1-1.2 Flash Point -- 180°F Heating Value 9-10 KBTU/lb
DOP Lights	220 lbs/hr Intermittent	2-Ethyl Hexenes 75-80% 2-Ethyl Hexanol 5-15% 2-Ethyl Hexanal 1-2% n-Butanol 2% Chlorine <0.1% Sulfur <0.1% Ash <0.1%	Organic Waste Stream Temp. 20-40°C (liq) Sp. Gr. 0.73-0.76 Viscosity 32 SUS @ 100°F Flash Point 135°F Heating Value 11-18 KBTU/lb
MX Organics	220 lbs/hr Intermittent	2-Ethyl Hexanol 20-30% n-Butanol 0-10% Isodecanol 10-20% Bis (2-Ethylhexyl) Phthalate 3.0% Di-n-butyl Phthalate 1.2% Phthalic acid esters, n.o.s 35-45% Chlorine <0.1% Sulfur <0.1% Ash <0.1%	Organic Waste Stream Temp. 20-40°C (liq) Viscosity 43 SUS @ 100°F Flash Point 131°F Heating Value 14-17 KBTU/lb

SUMMARY OF RESULTS

2.1 Presentation. The results of the trial burn are summarized in Tables 2-1 through 2-30. Table 2-1 presents the RCRA test results, and Tables 2-2 through 2-23 present run-by-run results summaries for the testing. Table 2-24 presents the waste feed rates and incinerator destruction and removal efficiencies (DREs). Table 2-25 presents the combustion efficiencies determined from the CEM testing. Table 2-26 presents residence times for all of the runs. Tables 2-27 through 2-30 presents the process samples analytical results. Refer to the "List of Tables and Figures" on pages vii and viii of the Table of Contents for a cross reference.

Refer to Volume I, Appendix A for detailed test results. Field data is presented in Volume I, Appendix B; and analytical data is presented in Volume II, Appendix C.

2.2 RCRA Requirements. The following three sections give the RCRA requirements for a hazardous waste incinerator as well as a summary of the trial burn test results.

2.2.1 POHCs. The incinerator must have a destruction and removal efficiency (DRE) of at least 99.99% for each designated POHC. For all runs conducted during Cases I, II, and IV, the DREs for maleic anhydride and phthalic anhydride exceeded 99.99%.

2.2.2 Hydrogen Chloride. The incinerator must have a hydrogen chloride (HCl) emission rate of less than 4 pounds per hour in the effluent or, if control equipment is used, a HCl removal efficiency (RE) of at least 99%. No control equipment is used; therefore, the RE is not pertinent. For all runs conducted during Cases I, II, and IV, the emission rates were less than 4 pounds per hour.

2.2.3 Particulate. The incinerator must have an effluent particulate concentration of less than 0.08 grains per dry standard cubic foot corrected to 7% oxygen (gr/DSCF @ 7% O₂). For all runs, the particulate concentrations were less than 0.08 gr/DSCF at 7% O₂.

2.3 Discussion

2.3.1 Duplicate Analyses. For Case I, duplicate analyses were performed on process samples 2 and 5, run I-M5M-5, and run I-MHCl-2. For Case IV, duplicate

(continued on page 2-44)

TABLE 2-1
RCRA TESTS SUMMARY OF RESULTS
PAA Incinerator Stack

	Repetition		
	<u>1</u>	<u>2</u>	<u>3</u>
<u>Case I</u>			
<u>Maleic Anhydride</u>			
Mass Feed Rate, lb/hr	973	964	960
Mass Emission Rate, lb/hr	$< 7.91E-04$	$< 8.87E-04$	$< 8.29E-04$
DRE, %	> 99.9999	> 99.9999	> 99.9999
<u>Phthalic Anhydride</u>			
Mass Feed Rate, lb/hr	302	369	351
Mass Emission Rate, lb/hr	$1.34E-03$	$< 4.39E-04$	$< 4.07E-04$
DRE, %	99.9996	> 99.9999	> 99.9999
<u>Hydrogen Chloride</u>			
Mass Feed Rate, lb/hr	0.251	0.285	0.290
Mass Emission Rate, lb/hr	0.0139	0.0366	0.0337
<u>Filterable Particulate</u>			
Concen., gr/DSCF* at 7% O ₂	0.0422	0.0347	0.0248
<u>Filterable + Condensable Particulate</u>			
Concen., gr/DSCF* at 12% CO ₂ **	0.0668	0.0521	0.0354
<u>Case II</u>			
<u>Maleic Anhydride</u>			
Mass Feed Rate, lb/hr	1,158	1,116	1,106
Mass Emission Rate, lb/hr	$< 7.86E-04$	$< 8.39E-04$	$< 8.26E-04$
DRE, %	> 99.9999	> 99.9999	> 99.9999
<u>Phthalic Anhydride</u>			
Mass Feed Rate, lb/hr	147	139	133
Mass Emission Rate, lb/hr	$< 3.87E-04$	$< 4.11E-04$	$< 4.09E-04$
DRE, %	> 99.9997	> 99.9997	> 99.9997
<u>Hydrogen Chloride</u>			
Mass Feed Rate, lb/hr	0.365	0.423	0.406
Mass Emission Rate, lb/hr	0.0319	0.0313	0.0238
<u>Filterable Particulate</u>			
Concen., gr/DSCF* at 7% O ₂	0.0112	0.0111	0.0117
<u>Filterable + Condensable Particulate</u>			
Concen., gr/DSCF* at 12% CO ₂ **	0.0218	0.0296	0.0247

* 68°F - 29.92 in. Hg

** CO₂ corrected for the carbon in the fuel.

< = Calculated using the detection limit.

(continued next page)

TABLE 2-1 (continued)
 RCRA TESTS SUMMARY OF RESULTS
 PAA Incinerator Stack

	Repetition		
	<u>1</u>	<u>2</u>	<u>3</u>
<u>Case III</u>			
<u>Filterable Particulate</u>			
Concen., gr/DSCF* at 7% O ₂	0.0130	0.00730	0.00615
<u>Filterable + Condensable Particulate</u>			
Concen., gr/DSCF* at 12% CO ₂ **	0.0261	0.0303	0.0145
<u>Case IV</u>			
<u>Maleic Anhydride</u>			
Mass Feed Rate, lb/hr	11.0	11.4	11.5
Mass Emission Rate, lb/hr	< 3.14E-04	< 4.40E-04	< 3.78E-04
DRE, %	> 99.9971	> 99.9961	> 99.9967
<u>Phthalic Anhydride</u>			
Mass Feed Rate, lb/hr	219	221	214
Mass Emission Rate, lb/hr	< 1.53E-04	< 2.17E-04	2.62E-04
DRE, %	> 99.9999	> 99.9999	99.9999
<u>Hydrogen Chloride</u>			
Mass Feed Rate, lb/hr	0.0385	0.0403	0.0447
Mass Emission Rate, lb/hr	0.00357	0.00533	0.0138
<u>Filterable Particulate</u>			
Concen., gr/DSCF* at 7% O ₂	0.0397	0.0454	0.0364
<u>Filterable + Condensable Particulate</u>			
Concen., gr/DSCF* at 12% CO ₂ **	0.0860	0.1095	0.0944

* 68°F - 29.92 in. Hg

** CO₂ corrected for the carbon in the fuel.

< = Calculated using the detection limit.

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ENTROPY

TABLE 2-2
 CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN OXIDES,
 OXYGEN, AND SULFUR DIOXIDE TESTS SUMMARY
 PAA Incinerator Stack, Case I

	I-CEM-1	I-CEM-2	I-CEM-3
Run Date	9/18/89	9/18/89	9/19/89
Volumetric Air Flow Rate, SCFM*	3,198	3,224	2,787
<u>Percent By Volume</u>			
Carbon Dioxide	14.9	15.0	16.1
Oxygen	6.7	6.6	5.6
<u>Concentration, ppmvd</u>			
Carbon Monoxide	< 1.0	< 1.0	< 1.0
Nitrogen Oxides as NO ₂	19.5	19.7	18.9
Sulfur Dioxide	104.5	106.6	112.0
<u>Emission Rate, lb/hr</u>			
Carbon Monoxide	< 0.0139	< 0.0141	< 0.0122
Nitrogen Oxides as NO ₂	0.447	0.455	0.377
Sulfur Dioxide	3.33	3.43	3.11
Run Date	I-CEM-4	I-CEM-5	I-CEM-6
Volumetric Air Flow Rate, SCFM**	9/19/89	9/20/89	9/20/89
<u>Percent By Volume</u>			
Carbon Dioxide	16.1	16.7	16.4
Oxygen	5.4	5.2	5.3
<u>Concentration, ppmvd</u>			
Carbon Monoxide	< 1.0	< 1.0	< 1.0
Nitrogen Oxides as NO ₂	19.5	17.8	16.9
Sulfur Dioxide	113.8	103.6	107.2
<u>Emission Rate, lb/hr</u>			
Carbon Monoxide	< 0.0129	< 0.0127	< 0.0136
Nitrogen Oxides as NO ₂	0.412	0.372	0.377
Sulfur Dioxide	3.35	3.02	3.33

* From concurrent runs I-NJM5-1, I-NJM5-2, and I-NJM5-3, respectively.

** From concurrent runs I-M5M-4, I-M5M-5, and I-M5M-6, respectively.

TABLE 2-3
HYDROGEN CHLORIDE, HYDROGEN HALIDES,
AND AMMONIA TESTS SUMMARY

PAA Incinerator Stack, Case I

	I-MHCL-1	I-MHCL-2	I-MHCL-3
Test Date	9/18/89	9/18/89	9/19/89
Run Start Time	1310	1600	900
Run Finish Time	1433	1728	1040
Volume Of Dry Gas Sampled, SCF*	33.452	35.201	35.502
Volumetric Air Flow Rates, SCFM**	3,198	3,224	2,787
<u>Ammonia Results</u>			
Concentration, ppmvd	0.449	1.12	0.211
Emission Rate, lb/hr	0.00380	0.00957	0.00156
<u>Hydrogen Chloride Results</u>			
Concentration, ppmvd	0.768	2.00	2.13
Emission Rate, lb/hr	0.0139	0.0366	0.0337
<u>Total Hydrogen Halides as HCl Results</u>			
Concentration, ppmvd	2.06	2.02	1.69
Emission Rate, lb/hr	0.0374	0.0370	0.0267

* 68 Degrees F -- 29.92 Inches of Mercury (Hg)

** From concurrent Runs I-NJM5-1, I-NJM5-2, and I-NJM5-3, Respectively.

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ENTROPY

TABLE 2-4
MALEIC AND PHTHALIC ANHYDRIDES TESTS SUMMARY
PAA Incinerator Stack, Case I

	I-M5M-4	I-M5M-5	I-M5M-
Run Date	9/19/89	9/20/89	9/20/89
Run Start Time	1335	1040	153
Run Finish Time	1649	1329	182
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	63.777	65.102	66.74
Percent Isokinetic	101.6	104.3	100.6
Flue Gas Parameters:			
Temperature, °F	1,816	1,908	1,861
Air Flow Rate, Dry SCFM *	2,949	2,918	3,113
Air Flow Rate, Wet ACFM	16,961	17,805	18,486
Excess Air, Percent	52	37	33
Maleic Anhydride:			
Concentration, ppmvd	< 0.0176	< 0.0199	< 0.0174
Emission Rate, lb/hr	< 7.91E-004	< 8.87E-004	< 8.29E-004
Phthalic Anhydride:			
Concentration, ppmvd	0.0197	< 0.00652	< 0.00567
Emission Rate, lb/hr	1.34E-003	< 4.39E-004	< 4.07E-004

< - Indicates the value is below the detection limit

* 68° F -- 29.92 Inches of Mercury (Hg)

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ENTROPY

TABLE 2-5

METALS TESTS SUMMARY

PAA Incinerator Stack, Case I

	I-MMTL-4	I-MMTL-5	I-MMTL-6
Run Date	9/19/89	9/20/89	9/20/89
Run Start Time	1335	1040	1535
Run Finish Time	1647	1327	1823
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	63.231	64.713	69.672
Percent Isokinetic	99.0	102.6	103.6
Flue Gas Parameters:			
Temperature, °F	1,816	1,908	1,861
Air Flow Rate, Dry SCFM *	2,972	2,972	3,129
Air Flow Rate, Wet ACFM	16,934	17,751	18,459
Excess Air, Percent	52	37	33
Antimony:			
Concentration, grains/DSCF *	< 4.88E-007	1.18E-006	1.11E-006
Emission Rate, lb/hr	< 1.24E-005	3.01E-005	2.99E-005
Arsenic:			
Concentration, grains/DSCF *	5.00E-007	1.45E-006	1.44E-006
Emission Rate, lb/hr	1.27E-005	3.69E-005	3.86E-005
Barium:			
Concentration, grains/DSCF *	< 9.76E-006	< 9.54E-006	< 8.86E-006
Emission Rate, lb/hr	< 2.49E-004	< 2.43E-004	< 2.38E-004

< - Indicates the value is below the detection limit

* 68° F -- 29.92 Inches of Mercury (Hg)

(Continued next page)

TABLE 2-5 (Continued)

METALS TESTS SUMMARY

PAA Incinerator Stack, Case I

	I-MMTL-4	I-MMTL-5	I-MMTL-
Beryllium:			
Concentration, grains/DSCF *	< 2.44E-006	< 2.38E-006	< 2.22E-006
Emission Rate, lb/hr	< 6.22E-005	< 6.07E-005	< 5.94E-005
Cadmium:			
Concentration, grains/DSCF *	< 2.44E-006	< 2.38E-006	< 2.22E-006
Emission Rate, lb/hr	< 6.22E-005	< 6.07E-005	< 5.94E-005
Chromium:			
Concentration, grains/DSCF *	< 4.88E-006	1.79E-005	2.66E-005
Emission Rate, lb/hr	< 1.24E-004	4.56E-004	7.13E-004
Lead:			
Concentration, grains/DSCF *	< 4.88E-006	< 4.77E-006	< 4.43E-006
Emission Rate, lb/hr	< 1.24E-004	< 1.21E-004	< 1.19E-004
Mercury:			
Concentration, grains/DSCF *	< 4.27E-007	< 4.17E-007	< 3.88E-007
Emission Rate, lb/hr	< 1.09E-005	< 1.06E-005	< 1.04E-005
Nickel:			
Concentration, grains/DSCF *	9.03E-005	1.67E-005	2.44E-005
Emission Rate, lb/hr	2.30E-003	4.25E-004	6.53E-004

< - Indicates the value is below the detection limit

* 68° F -- 29.92 Inches of Mercury (Hg)

(Continued next page)

TABLE 2-5 (Continued)

METALS TESTS SUMMARY

PAA Incinerator Stack, Case I

	I-MMTL-4	I-MMTL-5	I-MMTL-6
Selenium:	-----	-----	-----
Concentration, grains/DSCF *	< 2.44E-007	< 2.38E-007	< 2.22E-007
Emission Rate, lb/hr	< 6.22E-006	< 6.07E-006	< 5.94E-006
Silver:	-----	-----	-----
Concentration, grains/DSCF *	< 2.44E-006	< 2.38E-006	< 2.22E-006
Emission Rate, lb/hr	< 6.22E-005	< 6.07E-005	< 5.94E-005
Thallium:	-----	-----	-----
Concentration, grains/DSCF *	< 4.88E-006	< 4.77E-006	< 4.43E-006
Emission Rate, lb/hr	< 1.24E-004	< 1.21E-004	< 1.19E-004

< - Indicates the value is below the detection limit

* 68° F -- 29.92 Inches of Mercury (Hg)

TABLE 2-6
PARTICULATE TESTS SUMMARY
PAA Incinerator Stack, Case I

	I-NJM5-1	I-NJM5-2	I-NJM5-3
Run Date	9/18/89	9/18/89	9/19/89
Run Start Time	1310	1600	850
Run Finish Time	1439	1737	1048
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	34.929	34.909	34.202
Percent Isokinetic	101.4	102.6	93.9
Flue Gas Parameters:			
Temperature, °F	1,780	1,781	1,833
Air Flow Rate, Dry SCFM *	3,198	3,224	2,787
Air Flow Rate, Wet ACFM	18,227	18,459	16,022
Excess Air, Percent	41	45	41
Filterable Particulate:			
Concentration, grains/DSCF *	0.0452	0.0362	0.0264
Concentration, gr/DSCF @ 7% O ₂	0.0422	0.0347	0.0248
Emission Rate, lb/hr	1.24	1.00	0.631
Filterable & Condensable Particulate:			
Concentration, grains/DSCF *	0.0741	0.0561	0.0373
Concentration, gr/DSCF @ 12% CO ₂	0.0668	0.0521	0.0354
Concentration, gr/DSCF @ 7% O ₂	0.0692	0.0538	0.0350
Emission Rate, lb/hr	2.03	1.55	0.890

* 68° F -- 29.92 Inches of Mercury (Hg)

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ENTROPY

TABLE 2-7
TOTAL HYDROCARBONS TESTS SUMMARY
PAA Incinerator Stack, Case I

	I-NJM3-1	I-NJM3-2	I-NJM3-3
	-----	-----	-----
Test Date	9/18/89	9/18/89	9/19/89

Run Start Time	1310	1605	850
Run Finish Time	1440	1725	1050

Volumetric Air Flow Rate, SCFM*	3,198	3,224	2,787
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Total Hydrocarbons as Methane Results

Concentration, ppmvd	2.12	2.22	1.97
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Emission Rate, lb/hr	0.0169	0.0179	0.0137
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	I-NJM3-4	I-NJM3-5	I-NJM3-6
	-----	-----	-----
Test Date	9/19/89	9/20/89	9/20/89

Run Start Time	1340	1050	1535
Run Finish Time	1615	1330	1825

Volumetric Air Flow Rate, SCFM**	2,949	2,918	3,113
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Total Hydrocarbons as Methane Results

Concentration, ppmvd	1.57	2.20	1.78
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Emission Rate, lb/hr	0.0116	0.0160	0.0138
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* From concurrent Runs I-NJM5-1, I-NJM5-2 and I-NJM5-3, Respectively.

** From concurrent Runs I-M5M-4, I-M5M-5, and I-M5M-6, Respectively.

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ENTROPY

TABLE 2-8
 CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN OXIDES,
 OXYGEN, AND SULFUR DIOXIDE TESTS SUMMARY
 PAA Incinerator Stack, Case II

	<u>II-CEM-1</u>	<u>II-CEM-2</u>	<u>II-CEM-3</u>
Run Date	9/13/89	9/14/89	9/14/89
Volumetric Air Flow Rate, SCFM*	3,024	3,069	2,863
<u>Percent By Volume</u>			
Carbon Dioxide	16.2	15.9	16.5
Oxygen	6.0	6.2	5.6
<u>Concentration, ppmvd</u>			
Carbon Monoxide	< 1.0	< 1.0	< 1.0
Nitrogen Oxides as NO ₂	42.9	42.0	42.7
Sulfur Dioxide	91.7	84.1	88.3
<u>Emission Rate, lb/hr</u>			
Carbon Monoxide	< 0.0132	< 0.0134	< 0.0125
Nitrogen Oxides as NO ₂	0.929	0.924	0.876
Sulfur Dioxide	2.77	2.57	2.52
Run Date	<u>II-CEM-4</u>	<u>II-CEM-5</u>	<u>II-CEM-6</u>
Volumetric Air Flow Rate, SCFM**	3,514	3,063	2,949
<u>Percent By Volume</u>			
Carbon Dioxide	16.3	16.4	16.6
Oxygen	5.8	5.6	5.5
<u>Concentration, ppmvd</u>			
Carbon Monoxide	< 1.0	< 1.0	< 1.0
Nitrogen Oxides as NO ₂	46.1	47.9	47.3
Sulfur Dioxide	95.9	99.6	93.6
<u>Emission Rate, lb/hr</u>			
Carbon Monoxide	< 0.0153	< 0.0134	< 0.0129
Nitrogen Oxides as NO ₂	1.16	1.05	0.999
Sulfur Dioxide	3.36	3.04	2.75

* From concurrent runs II-M5M-1, II-M5M-2, and II-M5M-3, respectively.

** From concurrent runs II-NJM5-4, II-NJM5-5, and II-NJM5-6, respectively.

TABLE 2-9

HYDROGEN CHLORIDE, HYDROGEN HALIDES,
AND AMMONIA TESTS SUMMARY

PAA Incinerator Stack, Case II

	II-MHCL-4	II-MHCL-5	II-MHCL-6
Test Date	9/15/89	9/15/89	9/15/89
Run Start Time	1045	1330	1635
Run Finish Time	1200	1504	1755
Volume Of Dry Gas Sampled, SCF*	31.430	32.571	32.296
Volumetric Air Flow Rates, SCFM**	3,514	3,063	2,949
<u>Ammonia Results</u>			
Concentration, ppmvd	0.239	0.302	0.203
Emission Rate, lb/hr	0.00222	0.00246	0.00159
<u>Hydrogen Chloride Results</u>			
Concentration, ppmvd	1.60	1.80	1.42
Emission Rate, lb/hr	0.0319	0.0313	0.0238
<u>Total Hydrogen Halides as HCl Results</u>			
Concentration, ppmvd	1.48	1.31	1.38
Emission Rate, lb/hr	0.0296	0.0228	0.0231

* 68 Degrees F -- 29.92 Inches of Mercury (Hg)

** From concurrent Runs II-NJM5-4, II-NJM5-5, and II-NJM5-6, Respectively.

TABLE 2-10
MALEIC AND PHTHALIC ANHYDRIDES TESTS SUMMARY
PAA Incinerator Stack, Case II

	II-M5M-1	II-M5M-2	II-M5M-3
Run Date	9/13/89	9/14/89	9/14/89
Run Start Time	1516	1110	1610
Run Finish Time	1809	1406	1909
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	64.480	68.695	62.751
Percent Isokinetic	98.4	104.4	102.0
Flue Gas Parameters:			
Temperature, °F	1,822	1,816	1,775
Air Flow Rate, Dry SCFM *	3,024	3,069	2,863
Air Flow Rate, Wet ACFM	17,152	17,547	16,362
Excess Air, Percent	32	46	44
Maleic Anhydride:			
Concentration, ppmvd	< 0.0170	< 0.0179	< 0.0189
Emission Rate, lb/hr	< 7.86E-004	< 8.39E-004	< 8.26E-004
Phthalic Anhydride:			
Concentration, ppmvd	< 0.00555	< 0.00581	< 0.00619
Emission Rate, lb/hr	< 3.87E-004	< 4.11E-004	< 4.09E-004

< - Indicates the value is below the detection limit
 * 68° F -- 29.92 Inches of Mercury (Hg)

TABLE 2-11

METALS TESTS SUMMARY

PAA Incinerator Stack, Case II

	II-MMTL-1	II-MMTL-2	II-MMTL-
Run Date	9/13/89	9/14/89	9/14/8
Run Start Time	1515	1110	161
Run Finish Time	1808	1404	190
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	62.856	67.241	61.81!
Percent Isokinetic	96.3	103.0	102.1
Flue Gas Parameters:			
Temperature, °F	1,822	1,816	1,775
Air Flow Rate, Dry SCFM *	3,035	3,037	2,822
Air Flow Rate, Wet ACFM	17,125	17,574	16,417
Excess Air, Percent	32	46	44
Antimony:			
Concentration, grains/DSCF *	< 4.91E-007	5.35E-007	1.26E-006
Emission Rate, lb/hr	< 1.28E-005	1.39E-005	3.04E-005
Arsenic:			
Concentration, grains/DSCF *	7.22E-007	6.31E-007	2.72E-006
Emission Rate, lb/hr	1.88E-005	1.64E-005	6.58E-005
Barium:			
Concentration, grains/DSCF *	< 9.82E-006	< 9.18E-006	< 9.99E-006
Emission Rate, lb/hr	< 2.55E-004	< 2.39E-004	< 2.42E-004

< - Indicates the value is below the detection limit

* 68° F -- 29.92 Inches of Mercury (Hg)

(Continued next page)

TABLE 2-11 (Continued)

METALS TESTS SUMMARY

PAA Incinerator Stack, Case II

	II-MMTL-1	II-MMTL-2	II-MMTL-
Beryllium:	-----	-----	-----
Concentration, grains/DSCF *	< 2.46E-006	< 2.30E-006	< 2.50E-006
Emission Rate, lb/hr	< 6.39E-005	< 5.97E-005	< 6.04E-005
Cadmium:	-----	-----	-----
Concentration, grains/DSCF *	< 2.46E-006	< 2.30E-006	< 2.50E-006
Emission Rate, lb/hr	< 6.39E-005	< 5.97E-005	< 6.04E-005
Chromium:	-----	-----	-----
Concentration, grains/DSCF *	4.91E-006	< 4.59E-006	2.50E-005
Emission Rate, lb/hr	1.28E-004	< 1.19E-004	6.04E-004
Lead:	-----	-----	-----
Concentration, grains/DSCF *	< 4.91E-006	< 4.59E-006	< 4.99E-006
Emission Rate, lb/hr	< 1.28E-004	< 1.19E-004	< 1.21E-004
Mercury:	-----	-----	-----
Concentration, grains/DSCF *	3.36E-007	< 4.02E-007	< 4.37E-007
Emission Rate, lb/hr	8.75E-006	< 1.05E-005	< 1.06E-005
Nickel:	-----	-----	-----
Concentration, grains/DSCF *	7.86E-005	5.51E-005	2.50E-005
Emission Rate, lb/hr	2.04E-003	1.43E-003	6.04E-004

< - Indicates the value is below the detection limit
 * 68° F -- 29.92 Inches of Mercury (Hg)

(Continued next page)

TABLE 2-11 (Continued)

METALS TESTS SUMMARY

PAA Incinerator Stack, Case II

	II-MMTL-1	II-MMTL-2	II-MMTL-3
Selenium:	-----	-----	-----
Concentration, grains/DSCF *	3.00E-006	< 2.30E-007	< 2.50E-007
Emission Rate, lb/hr	7.79E-005	< 5.97E-006	< 6.04E-006
Silver:	-----	-----	-----
Concentration, grains/DSCF *	< 2.46E-006	< 2.30E-006	< 2.50E-006
Emission Rate, lb/hr	< 6.39E-005	< 5.97E-005	< 6.04E-005
Thallium:	-----	-----	-----
Concentration, grains/DSCF *	< 4.91E-006	< 4.59E-006	< 4.99E-006
Emission Rate, lb/hr	< 1.28E-004	< 1.19E-004	< 1.21E-004

< - Indicates the value is below the detection limit

* 58° F -- 29.92 Inches of Mercury (Hg)

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ENTROPY

TABLE 2-12

PARTICULATE TESTS SUMMARY

PAA Incinerator Stack, Case II

	II-NJM5-4	II-NJM5-5	II-NJM5-6
Run Date	9/15/89	9/15/89	9/15/89
Run Start Time	1040	1320	1635
Run Finish Time	1206	1510	1802
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	38.215	33.815	33.348
Percent Isokinetic	101.7	102.5	102.6
Flue Gas Parameters:			
Temperature, °F	1,812	1,807	1,813
Air Flow Rate, Dry SCFM *	3,514	3,063	2,949
Air Flow Rate, Wet ACFM	20,242	17,819	17,247
Excess Air, Percent	43	41	42
Filterable Particulate:			
Concentration, grains/DSCF *	0.0118	0.0119	0.0125
Concentration, gr/DSCF @ 7% O2	0.0112	0.0111	0.0117
Emission Rate, lb/hr	0.355	0.312	0.316
Filterable & Condensable Particulate:			
Concentration, grains/DSCF *	0.0243	0.0328	0.0272
Concentration, gr/DSCF @ 12% CO2	0.0218	0.0296	0.0247
Concentration, gr/DSCF @ 7% O2	0.0230	0.0306	0.0256
Emission Rate, lb/hr	0.731	0.861	0.688

* 68° F -- 29.92 Inches of Mercury (Hg)

TABLE 2-13

TOTAL HYDROCARBONS TESTS SUMMARY

PAA Incinerator Stack, Case II

	II-NJM3-1	II-NJM3-2	II-NJM3-3
Test Date	-----	-----	-----
	9/13/89	9/14/89	9/14/89

Run Start Time	1520	1115	1620
Run Finish Time	1815	1410	1915

Volumetric Air Flow Rate, SCFM*	3,024	3,069	2,863
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Total Hydrocarbons as Methane Results

Concentration, ppmvd	0.192	<	1.0	<	1.0
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Emission Rate, lb/hr	0.00145	< 0.00767	< 0.00715
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	II-NJM3-4	II-NJM3-5	II-NJM3-6
Test Date	-----	-----	-----
	9/15/89	9/15/89	9/15/89

Run Start Time	1045	1335	1640
Run Finish Time	1215	1510	1750

Volumetric Air Flow Rate, SCFM**	3,514	3,063	2,949
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Total Hydrocarbons as Methane Results

Concentration, ppmvd	<	1.0	<	1.0	<	1.0
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Emission Rate, lb/hr	< 0.00878	< 0.00765	< 0.00737
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* From concurrent Runs II-M5M-1, II-M5M-2, and II-M5M-3, Respectively.

** From concurrent Runs II-NJM5-4, II-NJM5-5, and II-NJM5-6, Respectively.

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ENTROPY

TABLE 2-14
 CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN OXIDES,
 OXYGEN, AND SULFUR DIOXIDE TESTS SUMMARY
 PAA Incinerator Stack, Case III

	<u>III-CEM-1</u>	<u>III-CEM-2</u>	<u>III-CEM-3</u>
Run Date	9/11/89	9/12/89	9/12/89
Volumetric Air Flow Rate, SCFM*	2,448	2,301	2,570
<u>Percent By Volume</u>			
Carbon Dioxide	14.9	15.4	15.9
Oxygen	6.1	5.3	5.0
<u>Concentration, ppmvd</u>			
Carbon Monoxide	< 1.0	< 1.0	< 1.0
Nitrogen Oxides as NO ₂	8.8	13.4	13.9
Sulfur Dioxide	54.4	58.9	58.6
<u>Emission Rate, lb/hr</u>			
Carbon Monoxide	< 0.0107	< 0.0100	< 0.0112
Nitrogen Oxides as NO ₂	0.154	0.221	0.256
Sulfur Dioxide	1.33	1.35	1.50

* From concurrent runs III-NJM5-1, III-NJM5-2, and III-NJM5-3, respectively.

TABLE 2-15
METALS TESTS SUMMARY
PAA Incinerator Stack, Case III

	III-MMTL-1	III-MMTL-3	III-MMTL-4
Run Date	9/11/89	9/12/89	9/13/89
Run Start Time	1702	1535	830
Run Finish Time	2026	1853	1145
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	68.438	71.685	68.193
Percent Isokinetic	106.1	102.1	103.0
Flue Gas Parameters:			
Temperature, °F	1,770	1,808	1,761
Air Flow Rate, Dry SCFM *	2,449	2,592	2,469
Air Flow Rate, Wet ACFM	14,103	15,518	14,470
Excess Air, Percent	45	39	40
Antimony:			
Concentration, grains/DSCF *	2.02E-006	6.76E-007	6.92E-007
Emission Rate, lb/hr	4.23E-005	1.50E-005	1.47E-005
Arsenic:			
Concentration, grains/DSCF *	2.13E-006	5.92E-007	9.87E-007
Emission Rate, lb/hr	4.48E-005	1.32E-005	2.09E-005
Barium:			
Concentration, grains/DSCF *	< 9.02E-006	< 8.61E-006	< 9.05E-006
Emission Rate, lb/hr	< 1.89E-004	< 1.91E-004	< 1.92E-004

< - Indicates the value is below the detection limit
 * 68 ° F -- 29.92 Inches of Mercury (Hg)

(Continued next page)

TABLE 2-15 (Continued)

METALS TESTS SUMMARY

PAA Incinerator Stack, Case III

	III-MMTL-1	III-MMTL-3	III-MMTL-4
Beryllium:			
Concentration, grains/DSCF *	< 2.25E-006	< 2.15E-006	< 2.26E-006
Emission Rate, lb/hr	< 4.73E-005	< 4.78E-005	< 4.79E-005
Cadmium:			
Concentration, grains/DSCF *	6.76E-006	4.31E-006	< 2.26E-006
Emission Rate, lb/hr	1.42E-004	9.57E-005	< 4.79E-005
Chromium:			
Concentration, grains/DSCF *	1.13E-005	8.61E-006	6.79E-006
Emission Rate, lb/hr	2.37E-004	1.91E-004	1.44E-004
Lead:			
Concentration, grains/DSCF *	< 4.51E-006	< 4.31E-006	< 4.53E-006
Emission Rate, lb/hr	< 9.47E-005	< 9.57E-005	< 9.58E-005
Mercury:			
Concentration, grains/DSCF *	3.09E-007	< 5.17E-007	< 4.53E-007
Emission Rate, lb/hr	6.48E-006	< 1.15E-005	< 9.58E-005
Nickel:			
Concentration, grains/DSCF *	1.13E-005	< 4.31E-006	< 4.53E-006
Emission Rate, lb/hr	2.37E-004	< 9.57E-005	< 9.58E-005

< - Indicates the value is below the detection limit
 * 68° F -- 29.92 Inches of Mercury (Hg)

(Continued next page)

TABLE 2-15 (Continued)

METALS TESTS SUMMARY

PAA Incinerator Stack, Case III

	III-MMTL-1	III-MMTL-3	III-MMTL-4
Selenium:			
Concentration, grains/DSCF *	2.03E-006	< 2.15E-007	< 2.26E-007
Emission Rate, lb/hr	4.26E-005	< 4.78E-006	< 4.79E-006
Silver:			
Concentration, grains/DSCF *	< 2.25E-006	< 2.15E-006	< 2.26E-006
Emission Rate, lb/hr	< 4.73E-005	< 4.78E-005	< 4.79E-005
Thallium:			
Concentration, grains/DSCF *	< 4.51E-006	< 4.31E-006	< 4.53E-006
Emission Rate, lb/hr	< 9.47E-005	< 9.57E-005	< 9.58E-005

< - Indicates the value is below the detection limit
 * 68° F -- 29.92 Inches of Mercury (Hg)

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TABLE 2-16

PARTICULATE TESTS SUMMARY

PAA Incinerator Stack, Case III

	III-NJM5-1	III-NJM5-2	III-NJM5-3
Run Date	9/11/89	9/12/89	9/12/89
Run Start Time	1756	1050	1622
Run Finish Time	1955	1253	1817
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	33.477	34.338	38.613
Percent Isokinetic	104.8	104.2	107.0
Flue Gas Parameters:			
Temperature, °F	1,770	1,791	1,808
Air Flow Rate, Dry SCFM *	2,448	2,301	2,570
Air Flow Rate, Wet ACFM	14,116	13,408	15,559
Excess Air, Percent	45	47	39
Filterable Particulate:			
Concentration, grains/DSCF *	0.0135	0.00746	0.00663
Concentration, gr/DSCF @ 7% O2	0.0130	0.00730	0.00615
Emission Rate, lb/hr	0.282	0.147	0.146
Filterable & Condensable Particulate:			
Concentration, grains/DSCF *	0.0242	0.0262	0.0139
Concentration, gr/DSCF @ 12% CO2	0.0261	0.0303	0.0145
Concentration, gr/DSCF @ 7% O2	0.0234	0.0257	0.0129
Emission Rate, lb/hr	0.508	0.517	0.307

* 68° F -- 29.92 Inches of Mercury (Hg)

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TABLE 2-17

TOTAL HYDROCARBONS TESTS SUMMARY

PAA Incinerator Stack, Case III

	III-NJM3-1	III-NJM3-2	III-NJM3-3
Test Date	9/11/89	9/12/89	9/12/89
Run Start Time	1705	955	1540
Run Finish Time	2030	1345	1855
Volumetric Air Flow Rate, SCFM*	2,448	2,301	2,570
<u>Total Hydrocarbons as Methane Results</u>			
Concentration, ppmvd	< 1.0	< 1.0	< 1.0
Emission Rate, lb/hr	< 0.00611	< 0.00575	< 0.00672

* From concurrent Runs III-NJM5-1, III-NJM5-2, and III-NJM5-3, Respectively.

TABLE 2-18
 CARBON DIOXIDE, CARBON MONOXIDE, NITROGEN OXIDES,
 OXYGEN, AND SULFUR DIOXIDE TESTS SUMMARY
 PAA Incinerator Stack, Case IV

	<u>IV-CEM-1</u>	<u>IV-CEM-2</u>	<u>IV-CEM-3</u>
Run Date	9/21/89	9/21/89	9/21/89
Volumetric Air Flow Rate, SCFM*	2,720	2,379	2,320
<u>Percent By Volume</u>			
Carbon Dioxide	8.5	8.8	8.3
Oxygen	10.3	10.1	10.5
<u>Concentration, ppmvd</u>			
Carbon Monoxide	< 1.0	< 1.0	< 1.0
Nitrogen Oxides as NO ₂	66.9	74.8	68.9
Sulfur Dioxide	12.2	14.2	12.2
<u>Emission Rate, lb/hr</u>			
Carbon Monoxide	< 0.0119	< 0.0104	< 0.0101
Nitrogen Oxides as NO ₂	1.30	1.27	1.15
Sulfur Dioxide	0.331	0.337	0.282
Run Date	9/22/89	9/23/89	9/24/89
Volumetric Air Flow Rate, SCFM**	1,906	2,269	2,241
<u>Percent By Volume</u>			
Carbon Dioxide	8.8	8.7	8.2
Oxygen	10.1	10.3	10.7
<u>Concentration, ppmvd</u>			
Carbon Monoxide	< 1.0	< 1.0	1.5
Nitrogen Oxides as NO ₂	68.6	76.6	95.3
Sulfur Dioxide	9.4	10.3	7.1
<u>Emission Rate, lb/hr</u>			
Carbon Monoxide	< 0.00831	< 0.00990	0.0147
Nitrogen Oxides as NO ₂	0.937	1.25	1.53
Sulfur Dioxide	0.179	0.233	0.159

* From concurrent runs IV-M2-1, IV-NJM5-2, and IV-NJM5-3, respectively.

** From concurrent runs IV-M5M-4, IV-M5M-5, and IV-M5M-6, respectively.

TABLE 2-19

HYDROGEN CHLORIDE, HYDROGEN HALIDES,
AND AMMONIA TESTS SUMMARY

PAA Incinerator Stack, Case IV

	IV-MHCL-1	IV-MHCL-2	IV-MHCL-3
Test Date	9/21/89	9/21/89	9/21/89
Run Start Time	1045	1410	1725
Run Finish Time	1202	1527	1847
Volume Of Dry Gas Sampled, SCF*	35.430	35.030	35.460
Volumetric Air Flow Rates, SCFM**	2,720	2,379	2,320
<u>Ammonia Results</u>			
Concentration, ppmvd	0.265	0.321	0.198
Emission Rate, lb/hr	0.00191	0.00203	0.00122
<u>Hydrogen Chloride Results</u>			
Concentration, ppmvd	0.231	0.395	1.05
Emission Rate, lb/hr	0.00357	0.00533	0.0138
<u>Total Hydrogen Halides as HCl Results</u>			
Concentration, ppmvd	< 0.493	1.02 <	0.493
Emission Rate, lb/hr	< 0.00762	0.0137 <	0.00649

* 68 Degrees F -- 29.92 Inches of Mercury (Hg)

** From concurrent Runs IV-M2-1, IV-NJM5-2, and IV-NJM5-3, Respectively.

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TABLE 2-20
MALEIC AND PHTHALIC ANHYDRIDES TESTS SUMMARY
PAA Incinerator Stack, Case IV

	IV-M5M-4	IV-M5M-5	IV-M5M-6
Run Date	9/22/89	9/23/89	9/24/89
Run Start Time	900	1005	925
Run Finish Time	1303	1327	1334
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	63.048	61.588	65.598
Percent Isokinetic	102.6	101.0	102.7
Flue Gas Parameters:			
Temperature, °F	1,774	1,787	1,810
Air Flow Rate, Dry SCFM *	1,906	2,269	2,241
Air Flow Rate, Wet ACFM	8,943	10,781	10,359
Excess Air, Percent	129	99	111
Maleic Anhydride:			
Concentration, ppmvd	< 0.0108	< 0.0127	< 0.0110
Emission Rate, lb/hr	< 3.14E-004	< 4.40E-004	< 3.78E-004
Phthalic Anhydride:			
Concentration, ppmvd	< 0.00349	< 0.00415	0.0050
Emission Rate, lb/hr	< 1.53E-004	< 2.17E-004	2.62E-004

< - Indicates the value is below the detection limit
 * 68° F -- 29.92 Inches of Mercury (Hg)

TABLE 2-21
METALS TESTS SUMMARY
PAA Incinerator Stack, Case IV

	IV-MMTL-4	IV-MMTL-5	IV-MMTL-6
Run Date	9/22/89	9/23/89	9/24/89
Run Start Time	900	1005	925
Run Finish Time	1257	1323	1332
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	62.545	72.535	62.962
Percent Isokinetic	100.6	96.8	98.2
Flue Gas Parameters:			
Temperature, °F	1,774	1,787	1,810
Air Flow Rate, Dry SCFM *	1,927	2,266	2,238
Air Flow Rate, Wet ACFM	8,916	10,781	10,359
Excess Air, Percent	129	99	111
Antimony:			
Concentration, grains/DSCF *	8.64E-007	1.68E-006	9.41E-007
Emission Rate, lb/hr	1.43E-005	3.26E-005	1.81E-005
Arsenic:			
Concentration, grains/DSCF *	1.33E-006	2.72E-006	1.17E-006
Emission Rate, lb/hr	2.19E-005	5.29E-005	2.25E-005
Barium:			
Concentration, grains/DSCF *	< 9.87E-006	< 8.51E-006	< 9.80E-006
Emission Rate, lb/hr	< 1.63E-004	< 1.65E-004	< 1.88E-004

< - Indicates the value is below the detection limit
 * 58° F -- 29.92 Inches of Mercury (Hg)

(Continued next page)

TABLE 2-21 (Continued)

METALS TESTS SUMMARY

PAA Incinerator Stack, Case IV

	IV-MMTL-4	IV-MMTL-5	IV-MMTL-
Beryllium:	-----	-----	-----
Concentration, grains/DSCF *	< 2.47E-006	< 2.13E-006	< 2.45E-006
Emission Rate, lb/hr	< 4.08E-005	< 4.13E-005	< 4.70E-005
Cadmium:	-----	-----	-----
Concentration, grains/DSCF *	< 2.47E-006	< 2.13E-006	< 2.45E-006
Emission Rate, lb/hr	< 4.08E-005	< 4.13E-005	< 4.70E-005
Chromium:	-----	-----	-----
Concentration, grains/DSCF *	1.97E-005	1.70E-005	1.72E-005
Emission Rate, lb/hr	3.26E-004	3.31E-004	3.29E-004
Lead:	-----	-----	-----
Concentration, grains/DSCF *	< 4.93E-006	< 4.26E-006	< 4.90E-006
Emission Rate, lb/hr	< 8.15E-005	< 8.26E-005	< 9.40E-005
Mercury:	-----	-----	-----
Concentration, grains/DSCF *	< 3.21E-007	< 2.77E-007	< 3.19E-007
Emission Rate, lb/hr	< 5.30E-006	< 5.37E-006	< 6.11E-006
Nickel:	-----	-----	-----
Concentration, grains/DSCF *	1.97E-005	1.70E-005	1.47E-005
Emission Rate, lb/hr	3.26E-004	3.31E-004	2.82E-004

< - Indicates the value is below the detection limit
 * 68° F -- 29.92 Inches of Mercury (Hg)

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TABLE 2-21 (Continued)

METALS TESTS SUMMARY

PAA Incinerator Stack, Case IV

	IV-MMTL-4	IV-MMTL-5	IV-MMTL-6
Selenium:	-----	-----	-----
Concentration, grains/DSCF *	< 2.47E-007	< 2.13E-007	< 2.45E-007
Emission Rate, lb/hr	< 4.08E-006	< 4.13E-006	< 4.70E-006
Silver:	-----	-----	-----
Concentration, grains/DSCF *	< 2.47E-006	< 2.13E-006	< 2.45E-006
Emission Rate, lb/hr	< 4.08E-005	< 4.13E-005	< 4.70E-005
Thallium:	-----	-----	-----
Concentration, grains/DSCF *	< 4.93E-006	< 4.26E-006	< 4.90E-006
Emission Rate, lb/hr	< 8.15E-005	< 8.26E-005	< 9.40E-005

< - Indicates the value is below the detection limit
 * 68° F -- 29.92 Inches of Mercury (Hg)

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TABLE 2-22

PARTICULATE TESTS SUMMARY

PAA Incinerator Stack, Case IV

	IV-NJM5-2	IV-NJM5-3	IV-NJM5-7
Run Date	9/21/89	9/21/89	9/24/89
Run Start Time	1345	1715	1505
Run Finish Time	1557	1905	1638
Test Train Parameters:			
Volume Of Dry Gas Sample, SCF *	37.605	33.485	34.822
Percent Isokinetic	97.9	98.2	101.8
Flue Gas Parameters:			
Temperature, °F	1,788	1,783	1,810
Air Flow Rate, Dry SCFM *	2,379	2,320	2,217
Air Flow Rate, Wet ACFM	11,285	10,944	10,373
Excess Air, Percent	89	94	111
Filterable Particulate:			
Concentration, grains/DSCF *	0.0309	0.0344	0.0252
Concentration, gr/DSCF @ 7% O ₂	0.0397	0.0454	0.0364
Emission Rate, lb/hr	0.629	0.685	0.475
Filterable & Condensable Particulate:			
Concentration, grains/DSCF *	0.0374	0.0413	0.0309
Concentration, gr/DSCF @ 12% CO ₂	0.0860	0.1095	0.094
Concentration, gr/DSCF @ 7% O ₂	0.0480	0.0545	0.0444
Emission Rate, lb/hr	0.763	0.822	0.580

* 68° F -- 29.92 Inches of Mercury (Hg)

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TABLE 2-23
TOTAL HYDROCARBONS TESTS SUMMARY
PAA Incinerator Stack, Case IV

	IV-NJM3-1	IV-NJM3-2	IV-NJM3-3
Test Date	9/21/89	9/21/89	9/21/89
Run Start Time	1030	1400	1720
Run Finish Time	1230	1600	1905
Volumetric Air Flow Rate, SCFM*	2,720	2,379	2,320
<u>Total Hydrocarbons as Methane Results</u>			
Concentration, ppmvd	2.07	1.85	4.09
Emission Rate, lb/hr	0.0141	0.0110	0.0237
Test Date	9/22/89	9/23/89	9/24/89
Run Start Time	905	1015	930
Run Finish Time	1305	1330	1340
Volumetric Air Flow Rate, SCFM**	1,906	2,269	2,241
<u>Total Hydrocarbons as Methane Results</u>			
Concentration, ppmvd	1.96	2.22	1.46
Emission Rate, lb/hr	0.00933	0.0126	0.00817

* From concurrent Runs IV-M2-1, IV-NJM5-2, and IV-NJM5-3, Respectively.

** From concurrent Runs IV-M5M-4, IV-M5M-5, and IV-M5M-6, Respectively.

TABLE 2-24
WASTE FEED RATES AND INCINERATOR DREs

	Repetition		
	1	2	3
CASE I			
PAA Distillates Feed, lb/hr	264	264	262
Scrubber Water Feed, lb/hr	3,333	3,318	3,311
	Repetition	Repetition	Repetition
CASE I	4	5	6
PAA Distillates Feed, lb/hr	262	265	266
Scrubber Water Feed, lb/hr	3,287	3,317	3,330
<u>Maleic Anhydride</u>			
Content in PAA Distillates Feed, wt%	3.65	3.22	3.30
Content in Scrubber Water Feed, wt%	29.31	28.81	28.55
POHC Feed, lb/hr	973	964	960
Emission Rate, lb/hr	< 7.91E-04	< 8.87E-04	< 8.29E-04
DRE, %	> 99.9999	> 99.9999	> 99.9999
<u>Phthalic Anhydride</u>			
Content in PAA Distillates Feed, wt%	66.86	68.96	70.43
Content in Scrubber Water Feed, wt%	3.84	5.61	4.93
POHC Feed, lb/hr	302	369	351
Emission Rate, lb/hr	1.34E-03	< 4.39E-04	< 4.07E-04
DRE, %	99.9996	> 99.9999	> 99.9999
<u>Hydrogen Chloride</u>			
Total Halogens, as Cl, in P. Feed, ug/g	166	57	134
Total Halogens, as Cl, in Scr. Feed, ug/g	61	79	74
HCl Feed, lb/hr	0.251	0.285	0.290
Emission Rate, lb/hr	0.0139	0.0366	0.0337
	Repetition	Repetition	Repetition
CASE II	1	2	3
Scrubber Water Feed, lb/hr	3,527	3,561	3,537
Fuel Oil Flow, gpm	0.4	0.4	0.4
Density Fuel Oil, g/mL	0.9291	0.9285	0.9285
<u>Maleic Anhydride</u>			
Content in Scrubber Water Feed, wt%	32.82	31.34	31.26
POHC Feed, lb/hr	1,158	1,116	1,106
Emission Rate, lb/hr	< 7.86E-04	< 8.39E-04	< 8.26E-04
DRE, %	> 99.9999	> 99.9999	> 99.9999
<u>Phthalic Anhydride</u>			
Content in Scrubber Water Feed, wt%	4.16	3.91	3.75
POHC Feed, lb/hr	147	139	133
Emission Rate, lb/hr	< 3.87E-04	< 4.11E-04	< 4.09E-04
DRE, %	> 99.9997	> 99.9997	> 99.9997
<u>Hydrogen Chloride</u>			
Total Halogens, as Cl, in Scr. Feed, ug/g	52	66	73
Chlorine Content in Fuel Oil, ppm	920.90	948.75	736.40
HCl Feed, lb/hr	0.365	0.423	0.406
Emission Rate, lb/hr	0.0319	0.0313	0.0238

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TABLE 2-24 (continued)
WASTE FEED RATES AND INCINERATOR DRES

	Repetition		
	4	5	6
CASE II			
Scrubber Water Feed, lb/hr	3,516	3,512	3,529
Fuel Oil Flow, gpm	0.4	0.4	0.4
	Repetition		
	1	2	3
CASE III			
Scrubber Water Feed, lb/hr	3,022	3,018	3,013
			3,026
	Repetition		
	1	2	3
CASE IV			
PAA Distillates Feed, lb/hr	300	319	300
	Repetition		
	4	5	6
CASE IV			
PAA Distillates Feed, lb/hr	312	316	304
			320
<u>Maleic Anhydride</u>			
Content in Dist. Feed, wt%	3.52	3.60	3.79
POHC Feed, lb/hr	11.0	11.4	11.5
Emission Rate, lb/hr	< 3.14E-04	< 4.40E-04	< 3.78E-04
DRE, %	> 99.9971	> 99.9961	> 99.9967
<u>Phthalic Anhydride</u>			
Content in Dist. Feed, wt%	70.34	69.98	70.52
POHC Feed, lb/hr	219	221	214
Emission Rate, lb/hr	< 1.53E-04	< 2.17E-04	2.62E-04
DRE, %	> 99.9999	> 99.9999	99.9999
<u>Hydrogen Chloride</u>			
Total Halogens, as Cl, in PAA Feed, ug/g	120	124	143
HCl Feed, lb/hr	0.0385	0.0403	0.0447
Emission Rate, lb/hr	0.00357	0.00533	0.0138

< Calculated from a catch weight that was below the detection limit.

TABLE 2-25
COMBUSTION EFFICIENCIES

CASE I

	I-CEM-1	I-CEM-2	I-CEM-3
	-----	-----	-----
CO ₂ , Percent by Volume	14.9	15.0	16.1
CO, PPM by Volume, Dry	< 1.0	< 1.0	< 1.0
Combustion Efficiency, %	> 99.99	> 99.99	> 99.99
	I-CEM-4	I-CEM-5	I-CEM-6
	-----	-----	-----
CO ₂ , Percent by Volume	16.1	16.7	16.4
CO, PPM by Volume, Dry	< 1.0	< 1.0	< 1.0
Combustion Efficiency, %	> 99.99	> 99.99	> 99.99

CASE II

	II-CEM-1	II-CEM-2	II-CEM-3
	-----	-----	-----
CO ₂ , Percent by Volume	16.2	15.9	16.5
CO, PPM by Volume, Dry	< 1.0	< 1.0	< 1.0
Combustion Efficiency, %	> 99.99	> 99.99	> 99.99
	II-CEM-4	II-CEM-5	II-CEM-6
	-----	-----	-----
CO ₂ , Percent by Volume	16.3	16.4	16.6
CO, PPM by Volume, Dry	< 1.0	< 1.0	< 1.0
Combustion Efficiency, %	> 99.99	> 99.99	> 99.99

CASE III

	III-CEM-1	III-CEM-2	III-CEM-3
	-----	-----	-----
CO ₂ , Percent by Volume	14.9	15.4	15.9
CO, PPM by Volume, Dry	< 1.0	< 1.0	< 1.0
Combustion Efficiency, %	> 99.99	> 99.99	> 99.99

CASE IV

	IV-CEM-1	IV-CEM-2	IV-CEM-3
	-----	-----	-----
CO ₂ , Percent by Volume	8.5	8.8	8.3
CO, PPM by Volume, Dry	< 1.0	< 1.0	< 1.0
Combustion Efficiency, %	> 99.99	> 99.99	> 99.99
	IV-CEM-4	IV-CEM-5	IV-CEM-6
	-----	-----	-----
CO ₂ , Percent by Volume	8.8	8.7	8.2
CO, PPM by Volume, Dry	< 1.0	< 1.0	< 1.5
Combustion Efficiency, %	> 99.99	> 99.99	> 99.99

< Not Detected.

$$\text{Combustion Efficiency, \%} = \frac{\% \text{CO}_2 \text{ ex}}{\% \text{CO}_2 \text{ ex} + (\text{ppmvd CO}_{\text{ex}} / 10,000)} * 100$$

TABLE 2-26
RESIDENCE TIMES

Combustion Chamber Volume, ft³

900

CASE I

Volumetric Air Flow Rate, ACFM
Residence Time, seconds

	I-NJM5-1	I-NJM5-2	I-NJM5-3
	18,227	18,459	16,022
	2.96	2.93	3.37
	I-M5M-4	I-M5M-5	I-M5M-6
	16,961	17,805	18,486
	3.18	3.03	2.92
	I-MMTL-4	I-MMTL-5	I-MMTL-6
	16,934	17,751	18,459
	3.19	3.04	2.93

CASE II

Volumetric Air Flow Rate, ACFM
Residence Time, seconds

	II-NJM5-4	II-NJM5-5	II-NJM5-6
	20,242	17,819	17,247
	2.67	3.03	3.13
	II-M5M-1	II-M5M-2	II-M5M-3
	17,152	17,547	16,362
	3.15	3.08	3.30
	II-MMTL-1	II-MMTL-2	II-MMTL-3
	17,125	17,574	16,417
	3.15	3.07	3.29

CASE III

Volumetric Air Flow Rate, ACFM
Residence Time, seconds

	III-NJM5-1	III-NJM5-2	III-NJM5-3
	14,116	13,408	15,559
	3.83	4.03	3.47
	III-MMTL-1	III-MMTL-3	III-MMTL-4
	14,103	15,518	14,470
	3.83	3.48	3.73

CASE IV

Volumetric Air Flow Rate, ACFM
Residence Time, seconds

	IV-NJM5-2	IV-NJM5-3	IV-NJM5-7
	11,285	10,944	10,373
	4.79	4.93	5.21
	IV-M5M-4	IV-M5M-5	IV-M5M-6
	8,943	10,781	10,359
	6.04	5.01	5.21
	IV-MMTL-4	IV-MMTL-5	IV-MMTL-6
	8,916	10,781	10,359
	6.06	5.01	5.21

Combustion chamber volume, ft³ * 60

* Residence time, sec. = -----
Vol. Air Flow Rate, ACFM

TABLE 2-27
PROCESS SAMPLES ANALYTICAL RESULTS

Case I

	Sample		
	1	2*	3
<u>PAA Distillate Feed</u>			
Ash, wt%	0.215	0.207	0.179
Total Halogens, as Cl, µg/g	166	57	134
<u>Scrubber Water Feed</u>			
Ammonia, µg/g	< 0.12	1.23	1.30
Ash, wt%	0.034	0.016	0.068
Total Halogens, as Cl, µg/g	61	79	74
	4	5*	6
<u>PAA Distillate Feed</u>			
Maleic Anhydride, wt%	3.65	3.22	3.30
Phthalic Anhydride, wt%	66.86	68.96	70.43
Heat value, Btu/lb	9,022	9,348	9,170
Sulfur, wt%	< 0.088	< 0.088	< 0.088
Total Organic Carbon, as C, wt%	64.8	62.1	67.6
<u>Metals, µg/g</u>			
Antimony	< 0.125	< 0.125	< 0.125
Arsenic	< 0.125	< 0.125	< 0.125
Barium	< 5.00	< 5.00	< 5.00
Beryllium	< 1.25	< 1.25	< 1.25
Cadmium	< 1.25	< 1.25	< 1.25
Chromium	< 2.50	< 2.50	< 2.50
Lead	< 2.50	< 2.50	< 2.50
Mercury	< 0.475	< 0.475	< 0.475
Nickel	< 2.50	< 2.50	< 2.50
Selenium	< 0.125	< 0.125	< 0.125
Silver	< 1.25	< 1.25	< 1.25
Thallium	< 2.50	< 2.50	< 2.50
<u>Scrubber Water Feed</u>			
Maleic Anhydride, wt%	29.31	28.81	28.55
Phthalic Anhydride, wt%	3.84	5.61	4.93
Heat value, Btu/lb	2,347	2,430	2,546

* Average of duplicate analyses.

< Indicates that the value is below the detection limit.

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TABLE 2-27 (continued)
PROCESS SAMPLES ANALYTICAL RESULTS

Case I

	Sample		
	4	5*	6
<u>Scrubber Water Feed</u>			
pH	0.65	0.60	0.45
Sulfur, wt%	< 0.088	< 0.088	< 0.088
Total Organic Carbon, as C, wt%	20.4	20.2	18.3
Water, wt%	61.6	58.7	59.6
Metals, $\mu\text{g/g}$			
Antimony	0.006	0.010	< 0.005
Arsenic	< 0.005	< 0.005	< 0.005
Barium	< 0.200	< 0.200	< 0.200
Beryllium	< 0.050	< 0.050	< 0.050
Cadmium	< 0.050	< 0.050	< 0.050
Chromium	< 0.100	< 0.100	< 0.100
Lead	< 0.100	< 0.100	< 0.100
Mercury	< 0.019	< 0.019	< 0.019
Nickel	< 0.100	< 0.100	< 0.100
Selenium	< 0.005	< 0.005	< 0.005
Silver	< 0.050	< 0.050	< 0.050
Thallium	< 0.100	< 0.100	< 0.100

* Average of duplicate analyses.

< Indicates that the value is below the detection limit.

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TABLE 2-28
PROCESS SAMPLES ANALYTICAL RESULTS
Case II

	Sample		
	1	2	3
Scrubber Water Feed			
Maleic Anhydride, wt%	32.82*	31.34	31.26
Phthalic Anhydride, wt%	4.16*	3.91	3.75
Heat value, Btu/lb	2,851*	2,588	2,439
pH	0.2	0.45	0.4
Sulfur, wt%	< 0.088	< 0.088	< 0.088
Total Organic Carbon, as C, wt%	23.7	22.0	21.8
Water, wt%	54.5*	59.0	59.6
Metals, $\mu\text{g/g}$			
Antimony	0.008	0.024	0.006
Arsenic	< 0.005	< 0.005	< 0.005
Barium	0.600	< 0.200	< 0.200
Beryllium	< 0.050	< 0.050	< 0.050
Cadmium	< 0.050	< 0.050	< 0.050
Chromium	< 0.100	< 0.100	< 0.100
Lead	< 0.100	< 0.100	< 0.100
Mercury	< 0.019	< 0.019	< 0.019
Nickel	< 0.100	< 0.100	< 0.100
Selenium	< 0.005	< 0.005	< 0.005
Silver	< 0.050	< 0.050	< 0.050
Thallium	< 0.100	< 0.100	< 0.100
Fuel Oil			
Density @ 15°C, g/mL	0.9291	0.9285*	0.9285
Heat value, Btu/lb	19,043	19,119*	19,104
Sulfur, wt%	0.30	0.31*	0.27
Total Organic Carbon, as C, wt%	74.0	75.6*	75.8
Water, wt%	< 0.10	$< 0.10^*$	< 0.10
Metals			
Antimony, ppm	< 1.00	$< 1.00^*$	< 1.00
Arsenic, ppb	10.2	15.1*	11.3
Barium, ppm	0.76	0.29*	0.50
Beryllium, ppm	< 0.02	$< 0.02^*$	< 0.02
Cadmium, ppm	< 0.05	$< 0.05^*$	< 0.05
Chromium, ppm	< 0.25	$< 0.25^*$	< 0.25

* Average of duplicate analyses.

< Indicates that the value is below the detection limit.

Note: ppm = parts per million; ppb = parts per billion.

(continued next page)

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TABLE 2-28 (continued)
PROCESS SAMPLES ANALYTICAL RESULTS
Case II

	Sample		
	1	2	3
Fuel Oil			
Lead, ppm	0.87	0.64*	0.63
Mercury, ppb	< 0.50	$< 0.50^*$	< 0.50
Nickel, ppm	2.61	1.73*	0.92
Selenium, ppb	13.7	10.4*	7.12
Silver, ppm	< 0.06	$< 0.06^*$	< 0.06
Thallium, ppm	< 0.50	$< 0.50^*$	< 0.50
 Scrubber Water Feed			
Ammonia, $\mu\text{g/g}$	0.22	0.73	0.18
Ash, wt%	0.003	0.004	0.001
Total Halogens, as Cl, $\mu\text{g/g}$	52	66	73
 Fuel Oil			
Ash, wt%	1.34	0.02*	< 0.001
Density @ 15°C, g/mL	0.9273	0.9282*	0.9285
Total Halogens			
Bromine, ppm	40.29	45.65*	38.90
Chlorine, ppm	920.90	948.75*	736.40
Fluorine, ppm	< 0.10	$< 0.10^*$	< 0.10
Iodine, ppm	< 0.10	$< 0.10^*$	< 0.10

* Average of duplicate analyses.

< Indicates that the value is below the detection limit.

Note: ppm = parts per million; ppb = parts per billion.

TABLE 2-29
PROCESS SAMPLES ANALYTICAL RESULTS
Case III

	Sample			
	1	2	3	4
<u>Scrubber Water Feed</u>				
Ammonia, $\mu\text{g/g}$	0.67	< 0.12	< 0.12	---
Ash, wt%	0.004	0.003	0.019	---
Heat value, Btu/lb	2,009	4,454	2,267	---
pH	0.5	0.55	0.5	---
Sulfur, wt%	< 0.088	< 0.088	< 0.088	---
Total Halogens, as Cl, $\mu\text{g/g}$	114	182	143	---
Total Organic Carbon, as C, wt%	21.1	17.9	20.8	---
Water, wt%	62.4	60.2	62.8	---
Metals, $\mu\text{g/g}$				
Antimony	< 0.005	---	0.006	< 0.005
Arsenic	< 0.005	---	< 0.005	< 0.005
Barium	< 0.200	---	< 0.200	< 0.200
Beryllium	< 0.050	---	< 0.050	< 0.050
Cadmium	< 0.050	---	< 0.050	< 0.050
Chromium	< 0.100	---	< 0.100	< 0.100
Lead	< 0.100	---	< 0.100	< 0.100
Mercury	< 0.019	---	< 0.019	< 0.019
Nickel	< 0.100	---	< 0.100	< 0.100
Selenium	< 0.005	---	< 0.005	< 0.005
Silver	< 0.050	---	< 0.050	< 0.050
Thallium	< 0.100	---	< 0.100	< 0.100

< Indicates that the value is below the detection limit.

TABLE 2-30
PROCESS SAMPLES ANALYTICAL RESULTS
Case IV

	Sample		
	1	2	3
<u>PAA Distillate Feed</u>			
Ash, wt%	---	0.18	0.18
Total Halogens, as Cl, $\mu\text{g/g}$	120	124	143
	Sample		
	4	5	6
<u>PAA Distillate Feed</u>			
Maleic Anhydride, wt%	3.52	3.60	3.79
Phthalic Anhydride, wt%	70.34	69.98	70.52
Ash, wt%	---	---	---
Heat value, Btu/lb	9,312	9,347	9,309
Sulfur, wt%	0.036	0.033	0.019
Total Organic Carbon, as C, wt%	79.0	79.7	79.1
Metals			
Antimony	< 0.125	< 0.125	< 0.125
Arsenic	< 0.125	< 0.125	< 0.125
Barium	< 5.00	< 5.00	< 5.00
Beryllium	< 1.25	< 1.25	< 1.25
Cadmium	< 1.25	< 1.25	< 1.25
Chromium	< 2.50	< 2.50	< 2.50
Lead	< 2.50	< 2.50	< 2.50
Mercury	< 0.625	< 0.625	< 0.625
Nickel	< 2.50	< 2.50	< 2.50
Selenium	< 0.125	< 0.125	< 0.125
Silver	< 1.25	< 1.25	< 1.25
Thallium	< 2.50	< 2.50	< 2.50

< Indicates that the value is below the detection limit.

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analyses were performed on run IV-MMTL-4. For Case II, some duplicate analyses were performed on process samples 1, 2, and 5; refer to Table 2-28. The average of the two analytical results was used in the summary tables and emissions calculations.

2.3.2 Aborted Runs. Run III-MMTL-2 was aborted due to an unacceptable posttest leak check. A loose screw cap at the impinger arm was determined to be the cause. A fourth run was conducted as a replacement.

The moisture content for run IV-NJM5-1 was lower than determined for previous runs because the scrubber water feed was not operating during Case IV. The isokinetics were calculated to be 85.6%. This run was aborted and a fourth run was conducted as a replacement.

2.3.3 Run I-NJM3-2 Total Hydrocarbons. During the last 17 minutes of run I-NJM3-2, the electrometer from the instrument unexplainably went off scale. Excess particulate matter was found in the instrument filter. Data was not obtained for the final 17 minutes of the run. The instrument was repaired and continued to be used for the remaining NJATM3 runs conducted during Case I.

2.3.4 Velocity Traverses. Prior to the start of the trial burn, NJDEP, Entropy, and BASF agreed to pretest velocity traverses for each set of concurrent runs. Isokinetic sampling was conducted based on the average velocity head readings (Δp) from the pretest velocity traverses. Δp 's were monitored at a single point every five minutes throughout each run. If the Δp 's changed by more than 0.01 inches, sampling would cease and a new traverse would be performed. The remainder of each run would sample isokinetically based on the new traverse. During all runs, the Δp 's did not change more than 0.01 inches.

2.3.5 Chlorine Analyses. All total halogens were analyzed colorimetrically (EPA Method 352.2) on the bomb washings from the Btu determination. The high moisture content required the use of mineral oil as a combustion aid on the scrubber water. The total chloride level in these samples was low for waste feed.

Since the scrubber water and PAA distillate samples were opaque and extremely brown in solution, colorimetric and titrametric analyses were not appropriate for chloride measurements.

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2.3.6 Run II-M5M-2 Probe Breakage. The quartz probe was broken at the end of run II-M5M-2 during removal from the port. The train had a good leak check from the filter inlet. Mr. Frank Papp of NJDEP accepted this test run.

2.3.7 Total Hydrogen Halides. According to the test protocol, total organic halides emissions would be measured. However, the air permit requires the measurement of hydrogen halides. Therefore, hydrogen halides were measured in the stack gas instead of the organic halides referenced in the test protocol.

2.3.8 Feed Samples Water Analysis. The percent water in the feed samples was determined by ASTM Method D-3792 instead of the Karl Fischer method referenced in the test protocol. ASTM Method D-3792 utilizes gas chromatography with internal standards for quantification of the moisture. More accurate results are obtained using these analytical techniques for these samples matrices. The Karl Fischer method is more appropriate for the determination of parts per million water concentrations in pure products.

2.3.9 Antimony and Arsenic Results. The results for antimony and arsenic are in the general range of the field blank and previous filter blank results (1.5 μg and 2.4 μg for antimony and arsenic, respectively). Consequently, the results may only represent variations in blank values and not actual emissions of antimony and arsenic.

2.3.10 Hydrogen Chloride Emissions. The MHC_l samples were analyzed for both HCl and total hydrogen halides by two separate methods. For some samples, the HCl results were higher than the total hydrogen halide results. There are no reported negative interferents with the total hydrogen halide analytical method. The HCl results could be biased high by the other ionic compounds that coeluted with the HCl.

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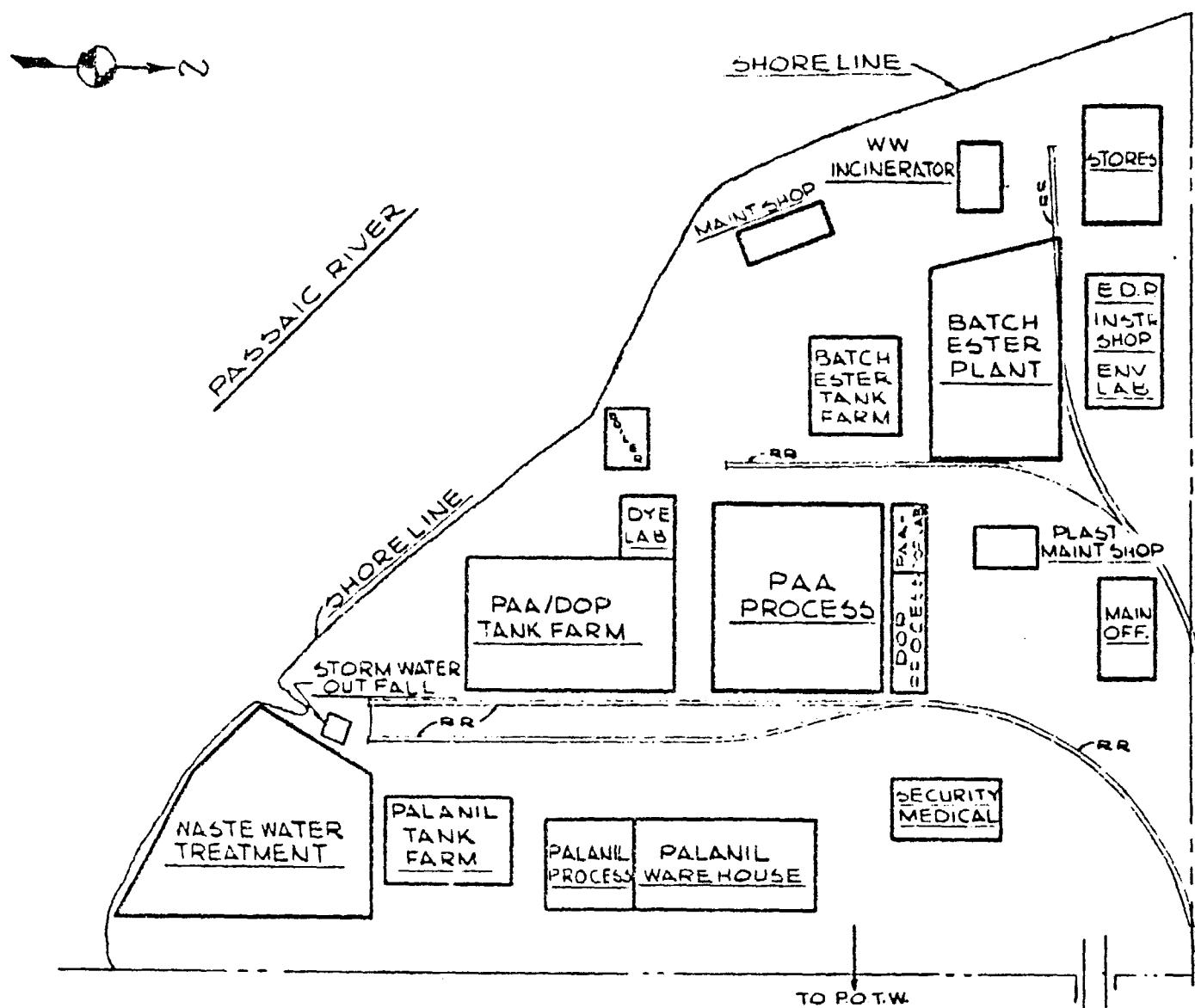
PROCESS DESCRIPTION AND OPERATION

3.1 General. BASF Corporation operates a John Zink Company single stage with auxiliary fuel incinerator for the destruction of liquid hazardous waste at their Kearny, New Jersey facility. No. 6 fuel oil and natural gas are used as the auxiliary fuel. The phthalic acid anhydride (PAA) incinerator, consisting of a combustion chamber and a stack, is designed to handle organic acids and anhydrides, ammonia, and water. PAA distillates and/or scrubber water are fed to the incinerator.

3.2 Source of Air Flow. Figure 3-1 is an air flow schematic which shows the passage of the flue gases exhausted by the incinerator.

3.3 Operation During Testing. Feed rate data supplied by BASF appears in Volume III, Appendix E.

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OVER VIEW
KEARNY WORKS

SECTION 4 - DATA PRESENTATION

4.01 General

This section presents a compilation of the analytical results collected from the two separate sampling programs, Phase I and Phase II, conducted at the Kearny, New Jersey facility. This presentation is divided into three sections, the first section is the presentation of the analytical data obtained from Phase I and Phase II sampling programs collected at the AEC, the second section is the presentation of the grid point analytical data obtained during Phase I from points identified within a 100' x 100' grid, and the third section is the presentation of the ground water investigation program. Included with each section is a comparison of the analytical results to the current NJDEPE NRDC Soil Cleanup Criteria guidelines or Ground Water Quality Standards as applicable. In order to facilitate the review of data, each area of concern is presented as a single unit. An area specific figure which includes a summary of analytical data (grid points, Phase I & II) collected to-date is provided for each area. The surface samples were taken at either 0"-6" or 18"-24" below the ground surface. Subsurface samples were taken at 0"-6" above the water table and range from 2.5' to 4'. BASF has included with this report a Remedial Alternative Analysis and Cleanup Plan (RAA/CUP) for the Kearny facility. The RAA/CUP provides a description of the status of the RAA and alternate cleanup levels.

Summary tables of analytical results are presented in the text. Results exceeding applicable NJDEPE criteria are shaded. Analytes with detection limits exceeding NJDEPE criteria are also shaded.

4.02 Soil Sampling

The following section provides an area by area breakdown of analytical results compiled from the two phases of ECRA soil sampling. This section will describe each area of concern and the analyses conducted in each area.

4.02.1 AEC #1 Buildings 19, 18, and 28A

AEC #1 is located in the extreme northwest corner of the Kearny facility. This area includes Buildings 19, 28 and 28A as well as the railroad spurs immediately adjacent to Buildings 28 and 28A. This area was used as a maintenance/instrument shop. The railroad spur served as a loading/unloading area for large pieces of equipment used in BASF's operations. AEC #1 is presented in Figure 4-1.

Phase I Sampling Program

Five soil samples collected at AEC #1 ranging in depth from 0-6" below the surface to 0-6" above the water table were analyzed for TPH and BN+15. These samples were collected from the stained area west of the railroad spur and adjacent to the aboveground diesel fuel tanks. The TPH analytical results indicate that the concentration of one sample at 14,800 mg/kg exceeds the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The BN+15 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria.

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)flouranthene
- Benzo(k)flouranthene
- bis(2-chloroethyl)ether
- BIS
- Dibenzo(a,h)anthracene
- 3,3'-Dichlorobenzidine
- Flouranthene
- Hexachlorobenzene
- Indeno(1,2,3-c,d)pyrene
- N-Nitrosodi-n-propylamine

The Phase I analytical results for samples collected in AEC #1 are presented in Table 4.02.1-1 following this discussion.

Phase II Sampling Program

Soil samples were collected from nine locations throughout AEC #1. One sample was taken in the stained area at a depth of 18"-24" and analyzed for VO+15. Four samples were taken around sample location SB1AEC1 at depths between 3 and 4 feet and were analyzed for TPH, BN+15, and VO+15. The four remaining samples were taken around the former 1,000 gallon underground gasoline tank at a depth of 3.5 feet and were analyzed for TPH and VO+15. The analytical results indicate that the concentrations of all the VO+15 constituents are below the NJDEPE's NRDC soil cleanup criteria. The TPH analytical results are also below the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The BN+15 analytical results indicate the following constituents are present at a concentration exceeding the NJDEPE's NRDC soil cleanup criteria. The analytical results indicate BIS at 807 mg/kg.

As indicated in Attachment 2 sample holding times were exceeded for three VO+15 soil samples associated with AEC #1. The three samples are AEC1-6, AEC1-7 and AEC1-9. These three locations will be resampled with the remaining Phase II soil samples and reported in the addendum to this submission.

The Phase II analytical results for samples collected in AEC #1 are presented in Table 4.02.1-2.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 1

Table 4.02.1-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AECI-1 0-0.5' 910118 FB9867	S AECI-2 0-0.5' 910118 FB9869	S AECI-ADD1 0.5-1' 910311 FC1941	S AECI-ADD2 0.5-1' 910311 FC1942	S SBI AECI 0-0.5' AWT 910114 FB9644
Petroleum Hydrocarbons (IR)	10000 mg/kg	5140	5500	368	108	14300
VOLATILE ORGANICS						
Acrolein	ug/kg	-	-	< 110	< 110	-
Acrylonitrile	5000 ug/kg	-	-	< 110	< 110	-
Benzene	13000 ug/kg	-	-	< 5.0	< 5.0	-
bis(Chloromethyl)ether	ug/kg	-	-	< 11	< 11	-
Bromoform	370000 ug/kg	-	-	< 5.3	< 5.3	-
Carbon tetrachloride	4000 ug/kg	-	-	< 3.2	< 3.2	-
Chlorobenzene	680000 ug/kg	-	-	< 6.8	< 6.8	-
Chlorodibromomethane	1000000 ug/kg	-	-	< 3.5	< 3.5	-
Chloroethane	ug/kg	-	-	< 11	< 11	-
2-Chloroethylvinyl ether	ug/kg	-	-	< 11	< 11	-
Chloroform	28000 ug/kg	-	-	< 1.8	< 1.8	-
Dichlorobromomethane	ug/kg	-	-	< 2.5	< 2.5	-
Dichlorodifluoromethane	ug/kg	-	-	< 11	< 11	-
1,1-Dichloroethane	1000000 ug/kg	-	-	< 5.3	< 5.3	-
1,2-Dichloroethane	24000 ug/kg	-	-	< 3.2	< 3.2	-
1,1-Dichloroethylene	150000 ug/kg	-	-	< 3.2	< 3.2	-
1,2-Dichloropropane	43000 ug/kg	-	-	< 6.8	< 6.8	-
cis-1,3-Dichloropropylene	5000 ug/kg	-	-	< 5.7	< 5.7	-
Ethylbenzene	1000000 ug/kg	-	-	< 8.2	< 8.2	-
Methyl bromide	ug/kg	-	-	< 11	< 11	-
Methyl chloride	ug/kg	-	-	< 11	< 11	-
Methylene chloride	210000 ug/kg	-	-	8.83	10.8	-
1,1,2,2-Tetrachloroethane	70000 ug/kg	-	-	< 7.8	< 7.8	-
Tetrachloroethylene	6000 ug/kg	-	-	< 4.7	< 4.6	-
Toluene	1000000 ug/kg	-	-	< 6.8	< 6.8	-
1,2-Trans-dichloroethylene	1000000 ug/kg	-	-	< 1.8	< 1.8	-
1,1,1-Trichloroethane	420000 ug/kg	-	-	< 4.3	< 4.3	-
1,1,2-Trichloroethane	420000 ug/kg	-	-	< 5.7	< 5.7	-
Trichloroethylene	54000 ug/kg	-	-	< 2.2	< 2.2	-
Trichlorofluoromethane	ug/kg	-	-	< 11	< 11	-
Vinyl chloride	7000 ug/kg	-	-	< 11	< 11	-
trans-1,3-Dichloropropylene	5000 ug/kg	-	-	< 11	< 11	-
SEMI-VOLATILE ORG.						
Acenaphthene	10000000 ug/kg	< 220	<11000	-	-	26300
Acenaphthylene	ug/kg	< 400	<21000	-	-	<16000
Anthracene	10000000 ug/kg	< 220	<11000	-	-	10800
Benzidine	ug/kg	< 5000	< 260000	-	-	< 200000
Benzo(a)anthracene	4000 ug/kg	< 890	<47000	-	-	<36000
Benzo(a)pyrene	660 ug/kg	< 280	<15000	-	-	<12000
Benzo(b)fluoranthene	4000 ug/kg	< 550	<29000	-	-	<22000
Benzo(ghi)perylene	ug/kg	< 470	<25000	-	-	<19000
Benzo(k)fluoranthene	4000 ug/kg	< 280	<15000	-	-	<12000
bis(2-Chloroethoxy)methane	ug/kg	< 600	<32000	-	-	<25000
bis(2-Chloroethyl) ether	3000 ug/kg	< 650	<34000	-	-	<27000
bis(2-Chloroisopropyl)ether	10000000 ug/kg	< 650	<34000	-	-	<27000
bis(2-Ethylhexyl)phthalate	210000 ug/kg	1610	5220000	-	-	1720000
4-Bromophenyl phenyl ether	ug/kg	< 220	<11000	-	-	< 8800
Butyl benzyl phthalate	10000000 ug/kg	< 1100	<60000	-	-	<47000
2-Choronaphthalene	ug/kg	< 220	<11000	-	-	< 8800
4-Chlorophenyl phenyl ether	ug/kg	< 480	<25000	-	-	<20000
Chrysene	40000 ug/kg	< 280	<15000	-	-	<12000

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "--" symbol indicates that analysis was not performed for a given analyte.

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BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 1

Table 4.02.1-1

SAMPLE ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC1-1 0-0.5' 910118 FB9867	S AEC1-2 0-0.5' 910118 FB9869	S AEC1-ADD1 0.5-1' 910311 FC1941	S AEC1-ADD2 0.5-1' 910311 FC1942	S SBIAEC1 0-0.5' AWT 910114 FB9644
Dibenzo(a,h)anthracene	660 ug/kg	< 280	<15000	-	-	<12000
1,2-Dichlorobenzene	10000000 ug/kg	< 220	<11000	-	-	< 8800
1,3-Dichlorobenzene	10000000 ug/kg	< 220	<11000	-	-	< 8800
1,4-Dichlorobenzene	10000000 ug/kg	< 500	<26000	-	-	<20000
3,3'-Dichlorobenzidine	6000 ug/kg	< 1880	<99000	-	-	<76800
Diethyl phthalate	10000000 ug/kg	< 1100	<60000	-	-	<47000
Dimethyl phthalate	10000000 ug/kg	< 1100	<60000	-	-	<47000
Di-n-butyl phthalate	10000000 ug/kg	< 1100	<60000	-	-	126000
2,4-Dinitrotoluene	ug/kg	< 650	<34000	-	-	<27000
2,6-Dinitrotoluene	ug/kg	< 220	<11000	-	-	< 8800
Di-n-octyl phthalate	10000000 ug/kg	< 1100	<60000	-	-	<47000
1,2-Diphenylhydrazine	ug/kg	< 1100	<60000	-	-	<47000
Fluoranthene	10000 ug/kg	< 250	<13000	-	-	30500
Fluorene	10000000 ug/kg	< 220	<11000	-	-	26400
Hexachlorobenzene	2000 ug/kg	< 220	<11000	-	-	< 8800
Hexachlorobutadiene	210000 ug/kg	< 100	< 5400	-	-	< 4200
Hexachlorocyclopentadiene	7300000 ug/kg	< 1100	<60000	-	-	<47000
Hexachloroethane	100000 ug/kg	< 180	< 9600	-	-	< 7500
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 420	<22000	-	-	<17000
Isophorone	10000000 ug/kg	4530	41700	-	-	27200
Naphthalene	4200000 ug/kg	< 180	< 9600	-	-	14100
Nitrobenzene	520000 ug/kg	< 220	<11000	-	-	< 8800
N-Nitrosodimethylamine	ug/kg	< 1100	<60000	-	-	<47000
N-Nitrosodi-n-propylamine	660 ug/kg	< 1100	<60000	-	-	<47000
N-Nitrosodiphenylamine	600000 ug/kg	< 220	<11000	-	-	< 8800
Phenanthrene	ug/kg	< 610	<32000	-	-	80500
Pyrene	10000 ug/kg	217	<11000	-	-	24400
1,2,4-Trichlorobenzene	1200000 ug/kg	< 220	<11000	-	-	< 8800

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

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PLE ID LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-1				AEC1-2			
		1.5-2'		3.5-4'					
		DAU629		DAU626					
		930629		930629					
Result	Unit	QA	MDL	Result	Unit	QA	MDL		
Petroleum Hydrocarbons (IR)	10000 (mg/kg)							6590 mg/kg	20.1
VOLATILE ORGANICS									
Methyl chloride		0 ug/kg	ND	12	0 ug/kg	ND	12		
Methyl bromide		0 ug/kg	ND	12	0 ug/kg	ND	12		
Dichlorodifluoromethane		0 ug/kg	ND	12	0 ug/kg	ND	12		
Vinyl chloride	7000	0 ug/kg	ND	12	0 ug/kg	ND	12		
Chloroethane		0 ug/kg	ND	12	0 ug/kg	ND	12		
Methylene chloride	210000	0 ug/kg	ND	3.3	10.1 ug/kg		3.4		
Acrolein		0 ug/kg	ND	120	0 ug/kg	ND	120		
Acrylonitrile	5000	0 ug/kg	ND	120	0 ug/kg	ND	120		
Trichlorofluoromethane		0 ug/kg	ND	12	0 ug/kg	ND	12		
1,1-Dichloroethylene	150000	0 ug/kg	ND	3.3	0 ug/kg	ND	3.4		
1,1-Dichloroethane	1000000	0 ug/kg	ND	5.5	0 ug/kg	ND	5.7		
1,2-Trans-dichloroethylene	1000000	0 ug/kg	ND	1.9	0 ug/kg	ND	1.9		
Chloroform	28000	0 ug/kg	ND	1.9	0 ug/kg	ND	1.9		
1,2-Dichloroethane	24000	0 ug/kg	ND	3.3	0 ug/kg	ND	3.4		
1,1,1-Trichloroethane	420000	0 ug/kg	ND	4.4	0 ug/kg	ND	4.6		
Carbon tetrachloride	4000	0 ug/kg	ND	3.3	0 ug/kg	ND	3.4		
Dichlorobromomethane		0 ug/kg	ND	2.6	0 ug/kg	ND	2.7		
1,2-Dichloropropane	43000	0 ug/kg	ND	7	0 ug/kg	ND	7.2		
cis-1,3-Dichloropropylene	5000	0 ug/kg	ND	5.8	0 ug/kg	ND	6		
Trichloroethylene	54000	0 ug/kg	ND	2.2	0 ug/kg	ND	2.3		
Chlorodibromomethane	1000000	0 ug/kg	ND	3.6	0 ug/kg	ND	3.7		
chloromethyl)ether		0 ug/kg	ND	12	0 ug/kg	ND	12		
benzene	13000	0 ug/kg	ND	5.1	0 ug/kg	ND	5.3		
1,1,2-Trichloroethane	420000	0 ug/kg	ND	5.8	0 ug/kg	ND	6		
trans-1,3-Dichloropropylene	5000	0 ug/kg	ND	12	0 ug/kg	ND	12		
2-Chloroethylvinyl ether		0 ug/kg	ND	12	0 ug/kg	ND	12		
Bromoform	370000	0 ug/kg	ND	5.5	0 ug/kg	ND	5.7		
1,1,2,2-Tetrachloroethane	70000	0 ug/kg	ND	8	0 ug/kg	ND	8.3		
Tetrachloroethylene	6000	0 ug/kg	ND	4.8	8.52 ug/kg		4.9		
Toluene	1000000	0 ug/kg	ND	7	20 ug/kg		7.2		
Chlorobenzene	680000	0 ug/kg	ND	7	0 ug/kg	ND	7.2		
Ethylbenzene	1000000	0 ug/kg	ND	8.4	0 ug/kg	ND	8.7		
SEMI-VOLATILE ORG.									
N-Nitrosodimethylamine					0 ug/kg	ND	740		
bis(2-Chloroethyl) ether	3000				0 ug/kg	ND	420		
1,3-Dichlorobenzene	1000000				0 ug/kg	ND	140		
1,4-Dichlorobenzene	1000000				0 ug/kg	ND	330		
1,2-Dichlorobenzene	1000000				0 ug/kg	ND	140		
N-Nitrosodi-n-propylamine	660				0 ug/kg	ND	740		
Hexachloroethane	100000				0 ug/kg	ND	120		
bis(2-Chloroisopropyl)ether	1000000				0 ug/kg	ND	420		
Nitrobenzene	520000				0 ug/kg	ND	140		
Isophorone	1000000				0 ug/kg	ND	160		
bis(2-Chloroethoxy)methane					0 ug/kg	ND	390		
1,2,4-Trichlorobenzene	1200000				0 ug/kg	ND	140		
Naphthalene	4200000				0 ug/kg	ND	120		
Hexachlorobutadiene	210000				0 ug/kg	ND	67		
Hexachlorocyclopentadiene	7300000				0 ug/kg	ND	740		
? "noronaphthalene					0 ug/kg	ND	140		
ethyl phthalate	10000000				0 ug/kg	ND	370		
Acenaphthylene					0 ug/kg	ND	260		
2,6-Dinitrotoluene					0 ug/kg	ND	140		

BASF Corporation
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 Phase II Sampling Summary-AEC 1

Table 4.02.1-2

PLE ID LTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-1				AEC1-2			
		1.5-2'		3.5-4'					
		DAU629		DAU626					
		930629		930629					
Result	Unit	QA	MDL	Result	Unit	QA	MDL		
Acenaphthene	10000000			532	ug/kg		140		
2,4-Dinitrotoluene				0	ug/kg	ND	420		
Diethyl phthalate	10000000			0	ug/kg	ND	740		
Fluorene	10000000			621	ug/kg		140		
4-Chlorophenyl phenyl ether				0	ug/kg	ND	310		
1,2-Diphenylhydrazine				0	ug/kg	ND	740		
N-Nitrosodiphenylamine	600000			0	ug/kg	ND	140		
4-Bromophenyl phenyl ether				0	ug/kg	ND	140		
Hexachlorobenzene	2000			0	ug/kg	ND	140		
Phenanthrene				253	ug/kg	BMDL	400		
Anthracene	10000000			0	ug/kg	ND	140		
Di-n-butyl phthalate	10000000			0	ug/kg	ND	740		
Fluoranthene	10000			884	ug/kg		160		
Pyrene	10000			2710	ug/kg		140		
Benzidine				0	ug/kg	ND	3300		
Butyl benzyl phthalate	10000000			0	ug/kg	ND	740		
Benzo(a)anthracene	4000			230	ug/kg	BMDL	580		
Chrysene	40000			251	ug/kg		190		
3,3'-Dichlorobenzidine	6000			0	ug/kg	ND	1230		
bis(2-Ethylhexyl)phthalate	210000			3720	ug/kg		740		
Di-n-octyl phthalate	10000000			168	ug/kg	BMDL	740		
Benzo(b)fluoranthene	4000			168	ug/kg	BMDL	360		
Benzo(k)fluoranthene	4000			0	ug/kg	ND	190		
>(a)pyrene	660			115	ug/kg	BMDL	190		
Inceno(1,2,3-c,d)pyrene	4000			96.8	ug/kg	BMDL	350		
Dibenzo(a,h)anthracene	660			0	ug/kg	ND	190		
Benzo(ghi)perylene				114	ug/kg	BMDL	310		
Phenol	10000000								
2-Chlorophenol	5200000								
2-Nitrophenol									
2,4-Dimethylphenol	10000000								
2,4-Dichlorophenol	3100000								
p-Chloro-m-cresol									
2,4,6-Trichlorophenol	270000								
2,4-Dinitrophenol	2100000								
4-Nitrophenol									
4,6-Dinitro-o-cresol									
Pentachlorophenol	24000								
Aroclor 1016	2000								
Aroclor 1221	2000								
Aroclor 1242	2000								
Aroclor 1248	2000								
Aroclor 1254	2000								
Aroclor 1260	2000								
Aroclor 1232	2000								
INORGANICS									
Antimony	340000								
Arsenic	2000								
Beryllium	1000								
Cadmium	100000								
Cerium									
Lead	600000								
Mercury	600000								
	270000								

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Phase II Sampling Summary-AEC 1*

Table 4.02.1-2

SAMPLE ID -PTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-1				AEC1-2			
		Result	Unit	QA	MDL	Result	Unit	QA	MDL
Nickel	2400000								
Selenium	3100000								
Silver	4100000								
Thallium	2000								
Zinc	1500000								

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 Phase II Sampling Summary-AEC 1

Table 4.02.1-2

SAMPLE ID LIC-PTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-3				AEC1-4			
		3.5-4'		3-3.5'					
		DAU625		DAU627					
		930629		930629					
Result	Unit	QA	MDL	Result	Unit	QA	MDL		
Petroleum Hydrocarbons (IR)	10000 (mg/kg)	1520 mg/kg	20.1	662 mg/kg			21.6		
VOLATILE ORGANICS									
Methyl chloride		0 ug/kg	ND	60	0 ug/kg	ND	15		
Methyl bromide		0 ug/kg	ND	60	0 ug/kg	ND	15		
Dichlorodifluoromethane		0 ug/kg	ND	60	0 ug/kg	ND	15		
Vinyl chloride	7000	0 ug/kg	ND	60	0 ug/kg	ND	15		
Chloroethane		0 ug/kg	ND	60	0 ug/kg	ND	15		
Methylene chloride	210000	30.7 ug/kg		17	13.3 ug/kg		4.2		
Acrolein		0 ug/kg	ND	600	0 ug/kg	ND	150		
Acrylonitrile	5000	0 ug/kg	ND	600	0 ug/kg	ND	150		
Trichlorofluoromethane		0 ug/kg	ND	60	0 ug/kg	ND	15		
1,1-Dichloroethylene	150000	0 ug/kg	ND	17	0 ug/kg	ND	4.2		
1,1-Dichloroethane	1000000	0 ug/kg	ND	28	0 ug/kg	ND	7.1		
1,2-Trans-dichloroethylene	1000000	0 ug/kg	ND	9.6	0 ug/kg	ND	2.4		
Chloroform	28000	0 ug/kg	ND	9.6	0 ug/kg	ND	2.4		
1,2-Dichloroethane	24000	0 ug/kg	ND	17	0 ug/kg	ND	4.2		
1,1,1-Trichloroethane	420000	0 ug/kg	ND	23	0 ug/kg	ND	5.8		
Carbon tetrachloride	4000	0 ug/kg	ND	17	0 ug/kg	ND	4.2		
Dichlorobromomethane		0 ug/kg	ND	13	0 ug/kg	ND	3.3		
1,2-Dichloropropane	43000	0 ug/kg	ND	36	0 ug/kg	ND	9.1		
cis-1,3-Dichloropropylene	5000	0 ug/kg	ND	30	0 ug/kg	ND	7.6		
Trichloroethylene	54000	0 ug/kg	ND	11	0 ug/kg	ND	2.9		
Chlorodibromomethane	1000000	0 ug/kg	ND	19	0 ug/kg	ND	4.7		
Chloromethyl)ether		0 ug/kg	ND	60	0 ug/kg	ND	15		
benzene	13000	0 ug/kg	ND	27	0 ug/kg	ND	6.7		
1,1,2-Trichloroethane	420000	0 ug/kg	ND	30	0 ug/kg	ND	7.6		
trans-1,3-Dichloropropylene	5000	0 ug/kg	ND	60	0 ug/kg	ND	15		
2-Chloroethylvinyl ether		0 ug/kg	ND	60	0 ug/kg	ND	15		
Bromoform	370000	0 ug/kg	ND	28	0 ug/kg	ND	7.1		
1,1,2,2-Tetrachloroethane	70000	0 ug/kg	ND	42	0 ug/kg	ND	10		
Tetrachloroethylene	6000	0 ug/kg	ND	25	0 ug/kg	ND	6.2		
Toluene	1000000	58.6 ug/kg		36	7.72 ug/kg	BMDL	9.1		
Chlorobenzene	680000	0 ug/kg	ND	36	0 ug/kg	ND	9.1		
Ethylbenzene	1000000	0 ug/kg	ND	43	0 ug/kg	ND	11		
SEMI-VOLATILE ORG.									
N-Nitrosodimethylamine		0 ug/kg	ND	7500	0 ug/kg	ND	10000		
bis(2-Chloroethyl) ether	3000	0 ug/kg	ND	4300	0 ug/kg	ND	5800		
1,3-Dichlorobenzene	1000000	0 ug/kg	ND	1400	0 ug/kg	ND	1900		
1,4-Dichlorobenzene	1000000	0 ug/kg	ND	3300	0 ug/kg	ND	4400		
1,2-Dichlorobenzene	1000000	0 ug/kg	ND	1400	0 ug/kg	ND	1900		
N-Nitrosodi-n-propylamine	660	0 ug/kg	ND	7500	0 ug/kg	ND	10000		
Hexachloroethane	100000	0 ug/kg	ND	1200	0 ug/kg	ND	1600		
bis(2-Chloroisopropyl)ether	1000000	0 ug/kg	ND	4300	0 ug/kg	ND	5800		
Nitrobenzene	520000	0 ug/kg	ND	1400	0 ug/kg	ND	1900		
Isophorone	1000000	0 ug/kg	ND	1600	0 ug/kg	ND	2200		
bis(2-Chloroethoxy)methane		0 ug/kg	ND	4000	0 ug/kg	ND	5400		
1,2,4-Trichlorobenzene	1200000	0 ug/kg	ND	1400	0 ug/kg	ND	1900		
Naphthalene	4200000	1830 ug/kg		1200	1280 ug/kg	BMDL	1600		
Hexachlorobutadiene	210000	0 ug/kg	ND	670	0 ug/kg	ND	910		
Hexachlorocyclopentadiene	7300000	0 ug/kg	ND	7500	0 ug/kg	ND	10000		
Chloronaphthalene		0 ug/kg	ND	1400	0 ug/kg	ND	1900		
ethyl phthalate	10000000	0 ug/kg	ND	3700	0 ug/kg	ND	5100		
Acenaphthylene		0 ug/kg	ND	2600	0 ug/kg	ND	3500		
2,6-Dinitrotoluene		0 ug/kg	ND	1400	0 ug/kg	ND	1900		

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Phase II Sampling Summary-AEC 1

Table 4.02.1-2

SAMPLE ID Lotto# LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-3				AEC1-4			
		3.5-4'				3-3.5'			
		DAU625				DAU627			
		930629				930629			
Result	Unit	QA	MDL	Result	Unit	QA	MDL		
Acenaphthene	10000000	1450 ug/kg		1400	0 ug/kg	ND	1900		
2,4-Dinitrotoluene		0 ug/kg	ND	4300	0 ug/kg	ND	5800		
Diethyl phthalate	10000000	0 ug/kg	ND	7500	0 ug/kg	ND	10000		
Fluorene	10000000	1200 ug/kg	BMDL	1400	0 ug/kg	ND	1900		
4-Chlorophenyl phenyl ether		0 ug/kg	ND	3100	0 ug/kg	ND	4200		
1,2-Diphenylhydrazine		0 ug/kg	ND	7500	0 ug/kg	ND	10000		
N-Nitrosodiphenylamine	600000	0 ug/kg	ND	1400	0 ug/kg	ND	1900		
4-Bromophenyl phenyl ether		0 ug/kg	ND	1400	0 ug/kg	ND	1900		
Hexachlorobenzene	2000	0 ug/kg	ND	1400	0 ug/kg	ND	1900		
Phenanthrene		3110 ug/kg	BMDL	4000	1900 ug/kg	BMDL	5500		
Anthracene	10000000	605 ug/kg	BMDL	1400	0 ug/kg	ND	1900		
Di-n-butyl phthalate	10000000	31100 ug/kg		7500	37400 ug/kg		10000		
Fluoranthene	10000	2430 ug/kg		1600	2530 ug/kg		2200		
Pyrene	10000	2250 ug/kg		1400	4540 ug/kg		1900		
Benzidine		0 ug/kg	ND	33000	0 ug/kg	ND	44000		
Butyl benzyl phthalate	10000000	0 ug/kg	ND	7500	0 ug/kg	ND	10000		
Benzo(a)anthracene	4000	0 ug/kg	ND	5800	2170 ug/kg	BMDL	7900		
Chrysene	40000	0 ug/kg	ND	1900	2850 ug/kg		2500		
3,3'-Dichlorobenzidine	6000	0 ug/kg	ND	12400	0 ug/kg	ND	16700		
bis(2-Ethylhexyl)phthalate	210000	307000 ug/kg		7500	285000 ug/kg		10000		
Di-n-octyl phthalate	10000000	47600 ug/kg		7500	14600 ug/kg		10000		
Benzo(b)fluoranthene	4000	0 ug/kg	ND	3600	3320 ug/kg	BMDL	4800		
Benzo(k)fluoranthene	4000	0 ug/kg	ND	1900	0 ug/kg	ND	2500		
o(a)pyrene	660	0 ug/kg	ND	1900	0 ug/kg	ND	2500		
Indeno(1,2,3-c,d)pyrene	4000	0 ug/kg	ND	3500	0 ug/kg	ND	4700		
Dibenzo(a,h)anthracene	660	0 ug/kg	ND	1900	0 ug/kg	ND	2500		
Benzo(ghi)perylene		0 ug/kg	ND	3100	0 ug/kg	ND	4100		
Phenol	10000000								
2-Chlorophenol	5200000								
2-Nitrophenol									
2,4-Dimethylphenol	10000000								
2,4-Dichlorophenol	3100000								
p-Chloro-m-cresol									
2,4,6-Trichlorophenol	270000								
2,4-Dinitrophenol	2100000								
4-Nitrophenol									
4,6-Dinitro-o-cresol									
Pentachlorophenol	24000								
Aroclor 1016	2000								
Aroclor 1221	2000								
Aroclor 1242	2000								
Aroclor 1248	2000								
Aroclor 1254	2000								
Aroclor 1260	2000								
Aroclor 1232	2000								
INORGANICS									
Antimony	340000								
Arsenic	2000								
Beryllium	1000								
Cadmium	100000								
Chromium									
Lead	600000								
Mercury	600000								
	270000								

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Phase II Sampling Summary-AEC 1*

Table 4.02.1-2

PLE ID LTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-3				AEC1-4			
		Result	Unit	QA	MDL	Result	Unit	QA	MDL
Nickel	2400000								
Selenium	3100000								
Silver	4100000								
Thallium	2000								
Zinc	1500000								

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PLE ID LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-5				AEC1-6			
		3.5-4'		3-3.5'					
		DAU628		DAV819					
		930629		930701					
Result	Unit	QA	MDL	Result	Unit	QA	MDL		
Petroleum Hydrocarbons (IR)	10000 (mg/kg)	93.7	mg/kg	19.3		22.4	mg/kg	19.5	
VOLATILE ORGANICS									
Methyl chloride		0 ug/kg	ND	10	0 ug/kg	ND	12		
Methyl bromide		0 ug/kg	ND	10	0 ug/kg	ND	12		
Dichlorodifluoromethane		0 ug/kg	ND	10	0 ug/kg	ND	12		
Vinyl chloride	7000	0 ug/kg	ND	10	0 ug/kg	ND	12		
Chloroethane		0 ug/kg	ND	10	0 ug/kg	ND	12		
Methylene chloride	210000	4.56 ug/kg		2.8	21.4 ug/kg		3.3		
Acrolein		0 ug/kg	ND	100	0 ug/kg	ND	120		
Acrylonitrile	5000	0 ug/kg	ND	100	0 ug/kg	ND	120		
Trichlorofluoromethane		0 ug/kg	ND	10	0 ug/kg	ND	12		
1,1-Dichloroethylene	150000	0 ug/kg	ND	2.8	0 ug/kg	ND	3.3		
1,1-Dichloroethane	1000000	0 ug/kg	ND	4.7	0 ug/kg	ND	5.5		
1,2-Trans-dichloroethylene	1000000	0 ug/kg	ND	1.6	0 ug/kg	ND	1.9		
Chloroform	28000	0 ug/kg	ND	1.6	0 ug/kg	ND	1.9		
1,2-Dichloroethane	24000	0 ug/kg	ND	2.8	0 ug/kg	ND	3.3		
1,1,1-Trichloroethane	420000	0 ug/kg	ND	3.8	0 ug/kg	ND	4.5		
Carbon tetrachloride	4000	0 ug/kg	ND	2.8	0 ug/kg	ND	3.3		
Dichlorobromomethane		0 ug/kg	ND	2.2	0 ug/kg	ND	2.6		
1,2-Dichloropropane	43000	0 ug/kg	ND	6	0 ug/kg	ND	7.1		
cis-1,3-Dichloropropylene	5000	0 ug/kg	ND	5	0 ug/kg	ND	5.9		
Trichloroethylene	54000	0 ug/kg	ND	1.9	0 ug/kg	ND	2.2		
Chlorodibromomethane	1000000	0 ug/kg	ND	3.1	0 ug/kg	ND	3.6		
Chloromethyl)ether		0 ug/kg	ND	10	0 ug/kg	ND	12		
benzene	13000	0 ug/kg	ND	4.4	0 ug/kg	ND	5.2		
1,1,2-Trichloroethane	420000	0 ug/kg	ND	5	0 ug/kg	ND	5.9		
trans-1,3-Dichloropropylene	5000	0 ug/kg	ND	10	0 ug/kg	ND	12		
2-Chloroethylvinyl ether		0 ug/kg	ND	10	0 ug/kg	ND	12		
Bromoform	370000	0 ug/kg	ND	4.7	0 ug/kg	ND	5.5		
1,1,2,2-Tetrachloroethane	70000	0 ug/kg	ND	6.9	0 ug/kg	ND	8.1		
Tetrachloroethylene	6000	0 ug/kg	ND	4.1	10.7 ug/kg		4.8		
Toluene	1000000	0 ug/kg	ND	6	5.34 ug/kg	BMDL	7.1		
Chlorobenzene	680000	0 ug/kg	ND	6	0 ug/kg	ND	7.1		
Ethylbenzene	1000000	0 ug/kg	ND	7.2	0 ug/kg	ND	8.5		
SEMI-VOLATILE ORG.									
N-Nitrosodimethylamine		0 ug/kg	ND	760					
bis(2-Chloroethyl) ether	3000	0 ug/kg	ND	440					
1,3-Dichlorobenzene	1000000	0 ug/kg	ND	150					
1,4-Dichlorobenzene	1000000	0 ug/kg	ND	340					
1,2-Dichlorobenzene	1000000	0 ug/kg	ND	150					
N-Nitrosodi-n-propylamine	660	0 ug/kg	ND	760					
Hexachloroethane	100000	0 ug/kg	ND	120					
bis(2-Chloroisopropyl)ether	1000000	0 ug/kg	ND	440					
Nitrobenzene	520000	0 ug/kg	ND	150					
Isophorone	1000000	0 ug/kg	ND	170					
bis(2-Chloroethoxy)methane		0 ug/kg	ND	400					
1,2,4-Trichlorobenzene	1200000	0 ug/kg	ND	150					
Naphthalene	4200000	155 ug/kg		120					
Hexachlorobutadiene	210000	0 ug/kg	ND	69					
Hexachlorocyclopentadiene	7300000	0 ug/kg	ND	760					
Chloronaphthalene		0 ug/kg	ND	150					
diethyl phthalate	1000000	0 ug/kg	ND	380					
Acenaphthylene		85.6 ug/kg	BMDL	270					
2,6-Dinitrotoluene		0 ug/kg	ND	150					

IPLE ID L-PTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-5 3.5-4' DAU628 930629				AEC1-6 3-3.5' DAV819 930701			
		Result	Unit	QA	MDL	Result	Unit	QA	MDL
		10000000	1030 ug/kg		150				
			0 ug/kg	ND	440				
Acenaphthene									
2,4-Dinitrotoluene									
Diethyl phthalate	10000000		0 ug/kg	ND	760				
Fluorene	10000000	1070	ug/kg		150				
4-Chlorophenyl phenyl ether			0 ug/kg	ND	320				
1,2-Diphenylhydrazine			0 ug/kg	ND	760				
N-Nitrosodiphenylamine	600000		0 ug/kg	ND	150				
4-Bromophenyl phenyl ether			0 ug/kg	ND	150				
Hexachlorobenzene	2000		0 ug/kg	ND	150				
Phenanthrene		3050	ug/kg		410				
Anthracene	10000000	807	ug/kg		150				
Di-n-butyl phthalate	10000000	707	ug/kg	BMDL	760				
Fluoranthene	10000	2670	ug/kg		170				
Pyrene	10000	2380	ug/kg		150				
Benzidine			0 ug/kg	ND	3400				
Butyl benzyl phthalate	10000000		0 ug/kg	ND	760				
Benzo(a)anthracene	4000	515	ug/kg	BMDL	600				
Chrysene	40000	509	ug/kg		190				
3,3'-Dichlorobenzidine	6000		0 ug/kg	ND	1260				
bis(2-Ethylhexyl)phthalate	210000	11000	ug/kg		760				
Di-n-octyl phthalate	10000000	302	ug/kg	BMDL	760				
Benzo(b)fluoranthene	4000	457	ug/kg		370				
Benzo(k)fluoranthene	4000		0 ug/kg	ND	190				
o(a)pyrene	660	275	ug/kg		190				
Indeno(1,2,3-c,d)pyrene	4000		0 ug/kg	ND	360				
Dibenzo(a,h)anthracene	660		0 ug/kg	ND	190				
Benzo(ghi)perylene			0 ug/kg	ND	310				
Phenol	10000000								
2-Chlorophenol	5200000								
2-Nitrophenol									
2,4-Dimethylphenol	10000000								
2,4-Dichlorophenol	3100000								
p-Chloro-m-cresol									
2,4,6-Trichlorophenol	270000								
2,4-Dinitrophenol	2100000								
4-Nitrophenol									
4,6-Dinitro-o-cresol									
Pentachlorophenol	24000								
Aroclor 1016	2000								
Aroclor 1221	2000								
Aroclor 1242	2000								
Aroclor 1248	2000								
Aroclor 1254	2000								
Aroclor 1260	2000								
Aroclor 1232	2000								
INORGANICS									
Antimony	340000								
Arsenic	2000								
Beryllium	1000								
Cadmium	100000								
Chromium									
Mercury	600000								
Lead	600000								
Mercury	270000								

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Phase II Sampling Summary-AEC 1*

Table 4.02.1-2

PLE ID TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-5				AEC1-6			
		Result	Unit	QA	MDL	Result	Unit	QA	MDL
Nickel	2400000								
Selenium	3100000								
Silver	4100000								
Thallium	2000								
Zinc	1500000								

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PLE ID LPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-7				AEC1-8			
		3-3.5' DAV817 930701				3-3.5' DAV818 930701			
		Result	Unit	QA	MDL	Result	Unit	QA	MDL
		10000 (mg/kg)	35.6 mg/kg		19.3	19.1 mg/kg	<		19.1
Petroleum Hydrocarbons (IR)									
VOLATILE ORGANICS									
Methyl chloride		0 ug/kg	ND	12	0 ug/kg	ND	11		
Methyl bromide		0 ug/kg	ND	12	0 ug/kg	ND	11		
Dichlorodifluoromethane		0 ug/kg	ND	12	0 ug/kg	ND	11		
Vinyl chloride	7000	0 ug/kg	ND	12	0 ug/kg	ND	11		
Chloroethane		0 ug/kg	ND	12	0 ug/kg	ND	11		
Methylene chloride	210000	10.2 ug/kg		3.3	27.8 ug/kg		3.2		
Acrolein		0 ug/kg	ND	120	0 ug/kg	ND	110		
Acrylonitrile	5000	0 ug/kg	ND	120	0 ug/kg	ND	110		
Trichlorofluoromethane		0 ug/kg	ND	12	0 ug/kg	ND	11		
1,1-Dichloroethylene	150000	0 ug/kg	ND	3.3	0 ug/kg	ND	3.2		
1,1-Dichloroethane	1000000	0 ug/kg	ND	5.5	0 ug/kg	ND	5.4		
1,2-Trans-dichloroethylene	1000000	0 ug/kg	ND	1.9	0 ug/kg	ND	1.8		
Chloroform	28000	0 ug/kg	ND	1.9	0 ug/kg	ND	1.8		
1,2-Dichloroethane	24000	0 ug/kg	ND	3.3	0 ug/kg	ND	3.2		
1,1,1-Trichloroethane	420000	0 ug/kg	ND	4.4	0 ug/kg	ND	4.4		
Carbon tetrachloride	4000	0 ug/kg	ND	3.3	0 ug/kg	ND	3.2		
Dichlorobromomethane		0 ug/kg	ND	2.6	0 ug/kg	ND	2.5		
1,2-Dichloropropane	43000	0 ug/kg	ND	7	0 ug/kg	ND	6.9		
cis-1,3-Dichloropropylene	5000	0 ug/kg	ND	5.8	0 ug/kg	ND	5.7		
Trichloroethylene	54000	0 ug/kg	ND	2.2	0 ug/kg	ND	2.2		
Chlorodibromomethane	1000000	0 ug/kg	ND	3.6	0 ug/kg	ND	3.6		
Chloromethyl)ether		0 ug/kg	ND	12	0 ug/kg	ND	11		
benzene	13000	0 ug/kg	ND	5.1	0 ug/kg	ND	5.1		
1,1,2-Trichloroethane	420000	0 ug/kg	ND	5.8	0 ug/kg	ND	5.7		
trans-1,3-Dichloropropylene	5000	0 ug/kg	ND	12	0 ug/kg	ND	11		
2-Chloroethylvinyl ether		0 ug/kg	ND	12	0 ug/kg	ND	11		
Bromoform	370000	0 ug/kg	ND	5.5	0 ug/kg	ND	5.4		
1,1,2,2-Tetrachloroethane	70000	0 ug/kg	ND	8	0 ug/kg	ND	7.9		
Tetrachloroethylene	6000	0 ug/kg	ND	4.8	24.5 ug/kg		4.7		
Toluene	1000000	0 ug/kg	ND	7	0 ug/kg	ND	6.9		
Chlorobenzene	680000	0 ug/kg	ND	7	0 ug/kg	ND	6.9		
Ethylbenzene	1000000	0 ug/kg	ND	8.4	0 ug/kg	ND	8.3		
SEMI-VOLATILE ORG.									
N-Nitrosodimethylamine									
bis(2-Chloroethyl) ether	3000								
1,3-Dichlorobenzene	1000000								
1,4-Dichlorobenzene	1000000								
1,2-Dichlorobenzene	1000000								
N-Nitrosodi-n-propylamine	660								
Hexachloroethane	100000								
bis(2-Chloroisopropyl)ether	1000000								
Nitrobenzene	520000								
Isophorone	1000000								
bis(2-Chloroethoxy)methane									
1,2,4-Trichlorobenzene	1200000								
Naphthalene	4200000								
Hexachlorobutadiene	210000								
Hexachlorocyclopentadiene	7300000								
Chloronaphthalene									
ethyl phthalate									
Acenaphthylene									
2,6-Dinitrotoluene									

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 Phase II Sampling Summary-AEC 1

Table 4.02.1-2

PLE ID LWTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AECI-7				AEC1-8			
		Result	Unit	QA	MDL	Result	Unit	QA	MDL
		3-3.5'		3-3.5'					
		DAV817		DAV818					
Acenaphthene	10000000								
2,4-Dinitrotoluene									
Diethyl phthalate	10000000								
Fluorene	10000000								
4-Chlorophenyl phenyl ether									
1,2-Diphenylhydrazine									
N-Nitrosodiphenylamine	600000								
4-Bromophenyl phenyl ether									
Hexachlorobenzene	2000								
Phenanthrene									
Anthracene	10000000								
Di-n-butyl phthalate	10000000								
Fluoranthene	10000								
Pyrene	10000								
Benzidine									
Butyl benzyl phthalate	10000000								
Benzo(a)anthracene	4000								
Chrysene	40000								
3,3'-Dichlorobenzidine	6000								
bis(2-Ethylhexyl)phthalate	210000								
Di-n-octyl phthalate	10000000								
Benzo(b)fluoranthene	4000								
Benzo(k)fluoranthene	4000								
(a)pyrene	660								
Indeno(1,2,3-c,d)pyrene	4000								
Dibenzo(a,h)anthracene	660								
Benzo(ghi)perylene									
Phenol	10000000								
2-Chlorophenol	5200000								
2-Nitrophenol									
2,4-Dimethylphenol	10000000								
2,4-Dichlorophenol	3100000								
p-Chloro-m-cresol									
2,4,6-Trichlorophenol	270000								
2,4-Dinitrophenol	2100000								
4-Nitrophenol									
4,6-Dinitro-o-cresol									
Pentachlorophenol	24000								
Aroclor 1016	2000								
Aroclor 1221	2000								
Aroclor 1242	2000								
Aroclor 1248	2000								
Aroclor 1254	2000								
Aroclor 1260	2000								
Aroclor 1232	2000								
INORGANICS									
Antimony	340000								
Arsenic	2000								
Beryllium	1000								
Cadmium	100000								
mum									
sr	600000								
Lead	600000								
Mercury	270000								

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Phase II Sampling Summary-AEC 1*

Table 4.02.1-2

SLE ID LTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-7				AEC1-8			
		Result	Unit	QA	MDL	Result	Unit	QA	MDL
Nickel	2400000								
Selenium	3100000								
Silver	4100000								
Thallium	2000								
Zinc	1500000								

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Table 4.02.1-2

SAMPLE ID LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-9			
		3-3.5' DAV820 930701			
		Result	Unit	QA	MDL
		10000 (mg/kg)	19.1 mg/kg	<	19.1
Petroleum Hydrocarbons (IR)					
VOLATILE ORGANICS					
Methyl chloride		0 ug/kg	ND	11	
Methyl bromide		0 ug/kg	ND	11	
Dichlorodifluoromethane		0 ug/kg	ND	11	
Vinyl chloride	7000	0 ug/kg	ND	11	
Chloroethane		0 ug/kg	ND	11	
Methylene chloride	210000	16.4 ug/kg		3.2	
Acrolein		0 ug/kg	ND	110	
Acrylonitrile	5000	0 ug/kg	ND	110	
Trichlorofluoromethane		0 ug/kg	ND	11	
1,1-Dichloroethylene	150000	0 ug/kg	ND	3.2	
1,1-Dichloroethane	1000000	0 ug/kg	ND	5.4	
1,2-Trans-dichloroethylene	1000000	0 ug/kg	ND	1.8	
Chloroform	28000	0 ug/kg	ND	1.8	
1,2-Dichloroethane	24000	0 ug/kg	ND	3.2	
1,1,1-Trichloroethane	420000	0 ug/kg	ND	4.4	
Carbon tetrachloride	4000	0 ug/kg	ND	3.2	
Dichlorobromomethane		0 ug/kg	ND	2.5	
1,2-Dichloropropane	43000	0 ug/kg	ND	6.9	
cis-1,3-Dichloropropylene	5000	0 ug/kg	ND	5.7	
Trichloroethylene	54000	0 ug/kg	ND	2.2	
Chlorodibromomethane	1000000	0 ug/kg	ND	3.6	
Chloromethyl)ether		0 ug/kg	ND	11	
Decaene	13000	0 ug/kg	ND	5.1	
1,1,2-Trichloroethane	420000	0 ug/kg	ND	5.7	
trans-1,3-Dichloropropylene	5000	0 ug/kg	ND	11	
2-Chloroethylvinyl ether		0 ug/kg	ND	11	
Bromoform	370000	0 ug/kg	ND	5.4	
1,1,2,2-Tetrachloroethane	70000	0 ug/kg	ND	7.9	
Tetrachloroethylene	6000	4.47 ug/kg	BMDL	4.7	
Toluene	1000000	1.61 ug/kg	BMDL	6.9	
Chlorobenzene	680000	0 ug/kg	ND	6.9	
Ethylbenzene	1000000	0 ug/kg	ND	8.3	
SEMI-VOLATILE ORG.					
N-Nitrosodimethylamine					
bis(2-Chloroethyl) ether	3000				
1,3-Dichlorobenzene	10000000				
1,4-Dichlorobenzene	10000000				
1,2-Dichlorobenzene	10000000				
N-Nitrosodi-n-propylamine	660				
Hexachloroethane	100000				
bis(2-Chloroisopropyl)ether	10000000				
Nitrobeazene	520000				
Isophorone	10000000				
bis(2-Chloroethoxy)methane					
1,2,4-Trichlorobenzene	1200000				
Naphthalene	4200000				
Hexachlorobutadiene	210000				
Hexachlorocyclopentadiene	7300000				
Phoronaphthalene					
ethyl phthalate	10000000				
Acenaphthylene					
2,6-Dinitrotoluene					

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Table 4.02.1-2

SLE ID Lotto# LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-9 3-3.5' DAV820 930701			
		Result	Unit	QA	MDL
Acenaphthene	10000000				
2,4-Dinitrotoluene					
Diethyl phthalate	10000000				
Fluorene	10000000				
4-Chlorophenyl phenyl ether					
1,2-Diphenylhydrazine					
N-Nitrosodiphenylamine	600000				
4-Bromophenyl phenyl ether					
Hexachlorobenzene	2000				
Phenanthrene					
Anthracene	10000000				
Di-n-butyl phthalate	10000000				
Fluoranthene	10000				
Pyrene	10000				
Benzidine					
Butyl benzyl phthalate	10000000				
Benzo(a)anthracene	4000				
Chrysene	40000				
3,3'-Dichlorobenzidine	6000				
bis(2-Ethylhexyl)phthalate	210000				
Di-n-octyl phthalate	10000000				
Benzo(b)fluoranthene	4000				
Benzo(k)fluoranthene	4000				
(a)pyrene	660				
Indeno(1,2,3-c,d)pyrene	4000				
Dibenzo(a,h)anthracene	660				
Benzo(ghi)perylene					
Phenol	10000000				
2-Chlorophenol	5200000				
2-Nitrophenol					
2,4-Dimethylphenol	10000000				
2,4-Dichlorophenol	3100000				
p-Chloro-m-cresol					
2,4,6-Trichlorophenol	270000				
2,4-Dinitrophenol	2100000				
4-Nitrophenol					
4,6-Dinitro-o-cresol					
Pentachlorophenol	24000				
Aroclor 1016	2000				
Aroclor 1221	2000				
Aroclor 1242	2000				
Aroclor 1248	2000				
Aroclor 1254	2000				
Aroclor 1260	2000				
Aroclor 1232	2000				
INORGANICS					
Antimony	340000				
Arsenic	2000				
Beryllium	1000				
Cadmium	100000				
Cromium					
Lead	600000				
Mercury	600000				
	270000				

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Table 4.02.1-2

PLE ID TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC1-9			
		Result	Unit	QA	MDL
Nickel	2400000				
Selenium	3100000				
Silver	4100000				
Thallium	2000				
Zinc	1500000				

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4.02.2 AEC #2 - Tank Farm Area

AEC #2 is a Tank Farm area which was used to store raw materials. This area is located within a concrete dike and pad, therefore, sampling was not conducted within the tank farm itself. In addition, immediately adjacent to the tank farm area, just south of AEC #1, is an area formerly used to stage excavated soils. This area was utilized to store excavated soil removed from the Railroad Spur #1 loading and unloading area of the PAA production area. The former soil pile was approximately 100 feet long by 10 feet wide. Soil was removed from the spurs as an interim remedial measure by BASF personnel. Five point composite samples were collected from the soil pile and subsequent analysis indicated the presence of phthalate esters. The excavated area was backfilled with clean fill and a steel catch basin was added to the spur as secondary containment to safeguard against accidental spills during product loading and unloading. To the east of AEC #2 is a 6,000 gallon #6 fuel oil above ground storage tank. As requested in the April 21, 1993 Phase II Sampling Plan approval letter from the NJDEPE the integrity of the pad around the tank and the tanks contact with the ground will be determined. This information will be provided as an addendum to the Phase II sampling plan data presentation.

AEC #2 is presented in Figure 4-2 and the railroad spur as Figure 4-2A.

Phase I Sampling Program

Seven soil samples collected at AEC #2 from the 0-6" interval below the surface were analyzed for TPH and BN+15. Two samples were collected from the 0-6" interval above the water table. The TPH analytical results are below the NJDEPE's

NRDC soil cleanup criteria of 10,000 mg/kg. The BN+15 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria.

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)flouranthene
- Benzo(k)flouranthene
- bis(2-chloroethyl)ether
- BIS
- Dibenzo(a,h)anthracene
- 3,3'-Dichlorobenzidine
- Hexachlorobenzene
- Indeno(1,2,3-c,d)pyrene
- N-Nitrosodi-n-propylamine

The Phase I analytical results for samples collected in AEC #2 are presented in Table 4.02.2-1 following this discussion.

Phase II Sampling Program

Post-excavation soil samples were taken from nine soil boring locations along the northerly and westerly limits of excavation along Railroad Spur #1. Two samples were taken from each boring at depths of 0-6" and 3.5-4' below the surface. These samples were analyzed for BN+15. The BN+15 analytical results indicate the following constituents to exist at concentrations exceeding the NJDEPE's NRDC soil cleanup criteria. The analytical results indicate that BIS concentrations range from 240 mg/kg to 10,000 mg/kg. Flouranthene concentrations were at 13.5 mg/kg and 34.1 mg/kg. Pyrene was at a concentration of 23.4 mg/kg. The Phase II analytical results for samples collected in AEC #2 are presented in Table 4.02.2-2.

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 Phase I Sampling Summary - AEC 2

Table 4.02.2-1

SAMPLE ID	NJDEPE Non-Residential Direct Contact	S AEC2-1 0-0.5'	S AEC2-2 0-0.5'	S AEC2-3 0-0.5'	S AEC2-4 0-0.5'	S AEC2-5 0-0.5'	S AEC2-6 0-0.5'	S AEC2-ADD1 0-0.5'	S SB1AEC2 0-0.5' AWT	S SB2AEC2 0-0.5' AWT
DEPTH	Cleanup Standards	910118	910118	910118	910118	910118	910311	910114	910114	
DATE		FB9872	FB9873	FB9870	FB9871	FB9868	FC1935	FB9645	FB9646	
LAB ID										
Petroleum Hydrocarbons (IR)	10000 mg/kg	1860	543	2850	3090	1450	1560	51.8	964	159
SEMI-VOLATILE ORG.										
Acenaphthene	10000000 ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
Acenaphthylene	ug/kg	< 4000	< 410	< 410	< 4000	< 390	< 400	< 450	< 420	< 410
Anthracene	10000000 ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
Benzidine	ug/kg	<51000	< 5100	< 5200	<50000	< 4900	< 5000	< 5600	< 5300	< 5200
Benzo(a)anthracene	4000 ug/kg	< 9000	< 900	< 920	< 8800	< 870	< 880	< 990	< 930	< 920
Benzo(a)pyrene	660 ug/kg	< 2900	< 290	835	< 2800	512	557	< 320	1050	344
Benzo(b)fluoranthene	4000 ug/kg	< 5500	< 560	1500	< 5400	1130	897	< 610	1680	< 570
Benzo(ghi)perylene	ug/kg	< 4700	< 470	1020	< 4600	< 460	693	< 520	994	< 480
Benzo(k)fluoranthene	4000 ug/kg	< 2900	< 290	581	< 2800	< 280	< 280	< 320	< 300	< 290
bis(2-Chloroethoxy)methane	ug/kg	< 6100	< 610	< 620	< 6000	< 590	< 600	< 680	< 630	< 630
bis(2-Chloroethyl) ether	3000 ug/kg	< 6600	< 660	< 670	< 6400	< 640	< 650	< 730	< 680	< 670
bis(2-Chloroisopropyl)ether	10000000 ug/kg	< 6600	< 660	< 670	< 6400	< 640	< 650	< 730	< 680	< 670
bis(2-Ethylhexyl)phthalate	210000 ug/kg	<12000	< 1200	1200	<11000	4630	4250	110000	< 1200	20100
4-Bromophenyl phenyl ether	ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
Butyl benzyl phthalate	10000000 ug/kg	<12000	< 1200	< 1200	<11000	< 1100	< 1100	< 1300	< 1200	< 1200
2-Chloronaphthalene	ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
4-Chlorophenyl phenyl ether	ug/kg	< 4800	< 490	< 490	< 4700	< 470	< 480	< 540	< 500	< 500
Chrysene	40000 ug/kg	< 2900	< 290	850	< 2800	462	567	< 320	1080	409
Dibenzo(a,h)anthracene	660 ug/kg	< 2900	< 290	< 290	< 2800	< 280	< 280	< 320	< 300	< 290
1,2-Dichlorobenzene	10000000 ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
1,3-Dichlorobenzene	10000000 ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
1,4-Dichlorobenzene	10000000 ug/kg	< 5100	< 510	< 520	< 5000	< 490	< 500	< 560	< 530	< 520
3,3'-Dichlorobenzidine	6000 ug/kg	<19000	< 1910	< 1940	<18600	< 1850	< 1870	< 2100	< 1970	< 1950
Diethyl phthalate	10000000 ug/kg	<12000	< 1200	< 1200	<11000	< 1100	< 1100	< 1300	< 1200	< 1200
Dimethyl phthalate	10000000 ug/kg	<12000	< 1200	< 1200	<11000	< 1100	< 1100	< 1300	< 1200	< 1200
Di-n-butyl phthalate	10000000 ug/kg	<12000	< 1200	< 1200	<11000	1840	< 1100	< 1300	< 1200	< 1200
2,4-Dinitrotoluene	ug/kg	< 6600	< 660	< 670	< 6400	< 640	< 650	< 730	< 680	< 670
2,6-Dinitrotoluene	ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
Di-n-octyl phthalate	10000000 ug/kg	<12000	< 1200	< 1200	<11000	< 1100	< 1100	< 1300	< 1200	< 1200
1,2-Diphenylhydrazine	ug/kg	<12000	< 1200	< 1200	<11000	< 1100	< 1100	< 1300	< 1200	< 1200
Fluoranthene	10000 ug/kg	< 2500	< 250	971	< 2500	583	804	< 280	1770	481
Fluorene	10000000 ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
Hexachlorobenzene	2000 ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
Hexachlorobutadiene	210000 ug/kg	< 1000	< 100	< 110	< 1000	< 100	< 100	< 110	< 110	< 110
Hexachlorocyclopentadiene	7300000 ug/kg	<12000	< 1200	< 1200	<11000	< 1100	< 1100	< 1300	< 1200	< 1200

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

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Phase I Sampling Summary – AEC 2*

Table 4.02.2-1

SAMPLE ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC2-1 0-0.5'	S AEC2-2 0-0.5'	S AEC2-3 0-0.5'	S AEC2-4 0-0.5'	S AEC2-5 0-0.5'	S AEC2-6 0-0.5'	S AEC2-ADD1 0-0.5'	S SB1AEC2 0-0.5' AWT	S SB2AEC2 0-0.5' AWT
DEPTH	910118	910118	910118	910118	910118	910118	910118	910311	910114	910114
DATE	FB9872	FB9873	FB9870	FB9871	FB9868	FB9866	FC1935	FB9645	FB9646	
LAB ID										
Hexachloroethane	100000 ug/kg	< 1800	< 190	< 190	< 1800	< 180	< 180	< 200	< 190	< 190
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 4300	< 430	830	< 4200	649	540	< 470	973	< 440
Isophorone	10000000 ug/kg	< 2500	< 250	23500	< 2500	33700	6160	< 280	27900	< 260
Naphthalene	4200000 ug/kg	< 1800	< 190	418	< 1800	217	209	< 200	284	< 190
Nitrobenzene	520000 ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
N-Nitrosodimethylamine	ug/kg	<12000	< 1200	< 1200	< 11000	< 1100	< 1100	< 1300	< 1200	< 1200
N-Nitrosodi-n-propylamine	660 ug/kg	< 12000	< 1200	< 1200	< 11000	< 1100	< 1100	< 1300	< 1200	< 1200
N-Nitrosodiphenylamine	600000 ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220
Phenanthrene	ug/kg	< 6200	< 630	796	< 6100	< 600	< 610	< 690	1410	< 640
Pyrene	10000 ug/kg	< 2200	< 220	1060	< 2100	628	836	< 240	1640	485
1,2,4-Trichlorobenzene	1200000 ug/kg	< 2200	< 220	< 220	< 2100	< 210	< 220	< 240	< 230	< 220

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

PLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-1A				AEC2-1B				AEC2-2A			
		0-0.5'				3.5-4'				0-0.5'			
		DAU621 930629				DAU622 930629				DAU623 930629			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)												
VOLATILE ORGANICS													
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
1,1,1-Tribromomethane	1000000												
1,1,2,2-Tetrachloroethane													
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine		ND	0 ug/kg	730	ND	0 ug/kg	720	ND	0 ug/kg	710			
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	420	ND	0 ug/kg	410	ND	0 ug/kg	400			
1,3-Dichlorobenzene	1000000	ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	130			
1,4-Dichlorobenzene	1000000	ND	0 ug/kg	320	ND	0 ug/kg	320	ND	0 ug/kg	310			
1,2-Dichlorobenzene	1000000	ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	130			
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	730	ND	0 ug/kg	720	ND	0 ug/kg	710			
Hexachloroethane	100000	ND	0 ug/kg	120	ND	0 ug/kg	120	ND	0 ug/kg	110			
bis(2-Chloroisopropyl)ether	1000000	ND	0 ug/kg	420	ND	0 ug/kg	410	ND	0 ug/kg	400			
Nitrobenzene	520000	ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	130			
Isophorone	1000000	ND	0 ug/kg	160	ND	0 ug/kg	160	ND	0 ug/kg	160			
bis(2-Chloroethoxy)methane		ND	0 ug/kg	390	ND	0 ug/kg	380	ND	0 ug/kg	380			
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	130			
Naphthalene	4200000	210 ug/kg	120			1900 ug/kg	120			9320 ug/kg	110		
Hexachlorobutadiene	210000	ND	0 ug/kg	66	ND	0 ug/kg	65	ND	0 ug/kg	64			
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	730	ND	0 ug/kg	720	ND	0 ug/kg	710			
Phenanthrene		ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	130			
Diethyl phthalate	10000000	ND	0 ug/kg	370	ND	0 ug/kg	360	ND	0 ug/kg	350			
Acenaphthylene		ND	0 ug/kg	260	ND	0 ug/kg	250	BMDL	114 ug/kg	250			
2,6-Dinitrotoluene		ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	130			

Parameters Not Analyzed

Parameters Not Analyzed

Parameters Not Analyzed

SAMPLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-1A 0-0.5' DAU621 930629			AEC2-1B 3.5-4' DAU622 930629			AEC2-2A 0-0.5' DAU623 930629				
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit
		ND	0	ug/kg	140	ND	853	ug/kg	140	ND	0	ug/kg
		ND	0	ug/kg	420	ND	0	ug/kg	410	ND	0	ug/kg
Acenaphthene	10000000	ND	0	ug/kg	140	ND	853	ug/kg	140	ND	0	ug/kg
2,4-Dinitrotoluene		ND	0	ug/kg	420	ND	0	ug/kg	410	ND	0	ug/kg
Diethyl phthalate	10000000	ND	0	ug/kg	730	ND	0	ug/kg	720	ND	0	ug/kg
Fluorene	10000000	ND	0	ug/kg	140	ND	630	ug/kg	140	ND	10800	ug/kg
4-Chlorophenyl phenyl ether		ND	0	ug/kg	310	ND	0	ug/kg	300	ND	0	ug/kg
1,2-Diphenyldihydrazine		ND	0	ug/kg	730	ND	0	ug/kg	720	ND	0	ug/kg
N-Nitrosodiphenylamine	600000	ND	0	ug/kg	140	ND	0	ug/kg	140	ND	0	ug/kg
4-Bromophenyl phenyl ether		ND	0	ug/kg	140	ND	0	ug/kg	140	ND	0	ug/kg
Hexachlorobenzene	2000	ND	0	ug/kg	140	ND	0	ug/kg	140	ND	0	ug/kg
Phenanthrene		ND	0	ug/kg	390	ND	1990	ug/kg	390	ND	7910	ug/kg
Anthracene	10000000	ND	0	ug/kg	140	ND	244	ug/kg	140	ND	0	ug/kg
Di-n-butyl phthalate	10000000	BMDL	322	ug/kg	730	ND	4990	ug/kg	720	ND	936	ug/kg
Fluoranthene	10000	ND	0	ug/kg	160	ND	1390	ug/kg	160	ND	3540	ug/kg
Pyrene	10000	ND	0	ug/kg	140	ND	1070	ug/kg	140	ND	0	ug/kg
Benzidine		ND	0	ug/kg	3200	ND	0	ug/kg	3200	ND	0	ug/kg
Butyl benzyl phthalate	10000000	ND	0	ug/kg	730	ND	0	ug/kg	720	ND	0	ug/kg
Benzo(a)anthracene	4000	ND	0	ug/kg	570	BMDL	150	ug/kg	560	ND	0	ug/kg
Chrysene	40000	ND	0	ug/kg	180	BMDL	139	ug/kg	180	ND	0	ug/kg
3,3'-Dichlorobenzidine	6000	ND	0	ug/kg	1210	ND	0	ug/kg	1190	ND	0	ug/kg
bis(2-Ethylhexyl)phthalate	210000	2910	ug/kg	730	ND	1670000	ug/kg	720	ND	12000000	ug/kg	
Di-n-octyl phthalate	10000000	ND	0	ug/kg	730	ND	1120	ug/kg	720	ND	58400	ug/kg
Benzo(b)fluoranthene	4000	ND	0	ug/kg	350	BMDL	103	ug/kg	350	ND	0	ug/kg
p-azo(k)fluoranthene	4000	ND	0	ug/kg	180	ND	0	ug/kg	180	ND	0	ug/kg
>(a)pyrene	660	ND	0	ug/kg	180	ND	0	ug/kg	180	ND	0	ug/kg
Indeno(1,2,3-c,d)pyrene	4000	ND	0	ug/kg	340	ND	0	ug/kg	340	ND	0	ug/kg
Dibenzo(a,h)anthracene	660	ND	0	ug/kg	180	ND	0	ug/kg	180	ND	0	ug/kg
Benzo(ghi)perylene		ND	0	ug/kg	300	ND	0	ug/kg	300	ND	0	ug/kg
Phenol	10000000											
2-Chlorophenol	5200000											
2-Nitrophenol												
2,4-Dimethylphenol	10000000											
2,4-Dichlorophenol	3100000											
p-Chloro-m-cresol												
2,4,6-Trichlorophenol	270000											
2,4-Dinitrophenol	2100000											
4-Nitrophenol												
4,6-Dinitro-o-cresol												
Pentachlorophenol	24000											
Aroclor 1016	2000											
Aroclor 1221	2000											
Aroclor 1242	2000											
Aroclor 1248	2000											
Aroclor 1254	2000											
Aroclor 1260	2000											
Aroclor 1232	2000											
INORGANICS												
Antimony	340000											
Arsenic	2000											
Beryllium	1000											
Cadmium	100000											
Manganese												
Lead	600000											
Mercury	600000											
	270000											
Parameters Not Analyzed												
Parameters Not Analyzed												
Parameters Not Analyzed												

PLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-1A 0-0.5'				AEC2-1B 3.5-4'				AEC2-2A 0-0.5'			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000												
Selenium	3100000												
Silver	4100000												
Thallium	2000												
Zinc	1500000												
		Parameters Not Analyzed				Parameters Not Analyzed				Parameters Not Analyzed			

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BASF Corporation
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 Phase II Sampling Summary-AEC 2

Table 4.02.2-

IPLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-2B				AEC2-3A				AEC2-3B			
		3.5-4'				0-0.5'				3.5-4'			
		DAU624				DAU609				DAU610			
		930629				930629				930629			
IPLE ID	NJDEPE	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)												
VOLATILE ORGANICS													
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
1,2-Dibromoethane	1000000												
Chloromethyl)ether													
Benzene	13000												
1,1,2-Trichloroethane	420000												
trans-1,3-Dichloropropylene	5000												
2-Chloroethylvinyl ether													
Bromoform	370000												
1,1,2,2-Tetrachloroethane	70000												
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine		ND	0 ug/kg	750	ND	0 ug/kg	710	ND	0 ug/kg	740			
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	430	ND	0 ug/kg	410	ND	0 ug/kg	420			
1,3-Dichlorobenzene	10000000	ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	140			
1,4-Dichlorobenzene	10000000	ND	0 ug/kg	330	ND	0 ug/kg	310	ND	0 ug/kg	320			
1,2-Dichlorobenzene	10000000	ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	140			
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	750	ND	0 ug/kg	710	ND	0 ug/kg	740			
Hexachloroethane	100000	ND	0 ug/kg	120	ND	0 ug/kg	110	ND	0 ug/kg	120			
bis(2-Chloroisopropyl)ether	10000000	ND	0 ug/kg	430	ND	0 ug/kg	410	ND	0 ug/kg	420			
Nitrobenzene	520000	ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	140			
Isophorone	10000000	ND	0 ug/kg	160	ND	0 ug/kg	160	ND	0 ug/kg	160			
bis(2-Chloroethoxy)methane		ND	0 ug/kg	400	ND	0 ug/kg	380	ND	0 ug/kg	390			
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	140			
Naphthalene	4200000	275	ug/kg	120		656	ug/kg	110		2770	ug/kg	120	
Hexachlorobutadiene	210000	ND	0 ug/kg	67	ND	0 ug/kg	64	ND	0 ug/kg	66			
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	750	ND	0 ug/kg	710	ND	0 ug/kg	740			
Phenanthrene		ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	140			
-ethyl phthalate	10000000	ND	0 ug/kg	370	ND	0 ug/kg	360	ND	0 ug/kg	370			
Acenaphthylene		BMDL	240	ug/kg	260	ND	0 ug/kg	250	ND	0 ug/kg	260		
2,6-Dinitrotoluene		ND	0 ug/kg	140	ND	0 ug/kg	140	ND	0 ug/kg	140			

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase II Sampling Summary-AEC 2

Table 4.02.2

APLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-2B				AEC2-3A				AEC2-3B			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000												
Selenium	3100000												
Silver	4100000												
Thallium	2000												
Zinc	1500000												
						Parameters Not Analyzed				Parameters Not Analyzed			Parameters Not Analyzed

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LE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-4A				AEC2-4B				AEC2-5A			
		0-0.5'				3.5-4'				0-0.5'			
		DAU611				DAU612				DAU613			
		930629				930629				930629			
Petroleum Hydrocarbons (IR)	10000 (mg/kg)	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
VOLATILE ORGANICS													
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
1,1-Dibromoethane (1,1-dibromoethyl)ether	1000000												
Benzene	13000												
1,1,2-Trichloroethane	420000												
trans-1,3-Dichloropropylene	5000												
2-Chloroethylvinyl ether													
Bromoform	370000												
1,1,2,2-Tetrachloroethane	70000												
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine		ND	0 ug/kg	710	ND	0 ug/kg	760	ND	0 ug/kg	710			
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	400	ND	0 ug/kg	430	ND	0 ug/kg	400			
1,3-Dichlorobenzene	1000000	ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	130			
1,4-Dichlorobenzene	1000000	ND	0 ug/kg	310	ND	0 ug/kg	340	ND	0 ug/kg	310			
1,2-Dichlorobenzene	1000000	ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	130			
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	710	ND	0 ug/kg	760	ND	0 ug/kg	710			
Hexachloroethane	100000	ND	0 ug/kg	110	ND	0 ug/kg	120	ND	0 ug/kg	110			
bis(2-Chloroisopropyl)ether	1000000	ND	0 ug/kg	400	ND	0 ug/kg	430	ND	0 ug/kg	400			
Nitrobenzene	520000	ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	130			
Isophorone	1000000	ND	0 ug/kg	160	ND	0 ug/kg	170	ND	0 ug/kg	160			
bis(2-Chloroethoxy)methane		ND	0 ug/kg	370	ND	0 ug/kg	400	ND	0 ug/kg	380			
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	130			
Naphthalene	4200000	ND	0 ug/kg	110		635 ug/kg	120	ND	0 ug/kg	110			
Hexachlorobutadiene	210000	ND	0 ug/kg	64	ND	0 ug/kg	69	ND	0 ug/kg	64			
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	710	ND	0 ug/kg	760	ND	0 ug/kg	710			
2-naphthalene		ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	130			
-n-butyl phthalate	10000000	ND	0 ug/kg	350	ND	0 ug/kg	380	ND	0 ug/kg	350			
Acenaphthylene		ND	0 ug/kg	250	ND	0 ug/kg	270	ND	0 ug/kg	250			
2,6-Dinitrotoluene		ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	130			

PLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-4A 0-0.5'				AEC2-4B 3.5-4'				AEC2-5A 0-0.5'			
		DAU611 930629				DAU612 930629				DAU613 930629			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Acenaphthene	10000000	ND	0	ug/kg	130		920	ug/kg	140	ND	0	ug/kg	130
2,4-Dinitrotoluene		ND	0	ug/kg	400	ND	0	ug/kg	430	ND	0	ug/kg	400
Diethyl phthalate	10000000	ND	0	ug/kg	710	ND	0	ug/kg	760	ND	0	ug/kg	710
Fluorene	10000000	ND	0	ug/kg	130		1930	ug/kg	140	ND	0	ug/kg	130
4-Chlorophenyl phenyl ether		ND	0	ug/kg	300	ND	0	ug/kg	320	ND	0	ug/kg	300
1,2-Diphenylhydrazine		ND	0	ug/kg	710	ND	0	ug/kg	760	ND	0	ug/kg	710
N-Nitrosodiphenylamine	600000	ND	0	ug/kg	130	ND	0	ug/kg	140	ND	0	ug/kg	130
4-Bromophenyl phenyl ether		ND	0	ug/kg	130	ND	0	ug/kg	140	ND	0	ug/kg	130
Hexachlorobenzene	2000	ND	0	ug/kg	130	ND	0	ug/kg	140	ND	0	ug/kg	130
Phenanthrene		ND	0	ug/kg	380		5600	ug/kg	410	ND	0	ug/kg	380
Anthracene	10000000	ND	0	ug/kg	130		997	ug/kg	140	ND	0	ug/kg	130
Di-n-butyl phthalate	10000000	BMDL	328	ug/kg	710	BMDL	532	ug/kg	760	BMDL	604	ug/kg	710
Fluoranthene	10000	ND	0	ug/kg	160		3940	ug/kg	170	ND	0	ug/kg	160
Pyrene	10000	ND	0	ug/kg	130		2990	ug/kg	140	ND	0	ug/kg	130
Benzidine		ND	0	ug/kg	3100	ND	0	ug/kg	3400	ND	0	ug/kg	3100
Butyl benzyl phthalate	10000000	ND	0	ug/kg	710	ND	0	ug/kg	760	ND	0	ug/kg	710
Benzo(a)anthracene	4000	ND	0	ug/kg	550	BMDL	561	ug/kg	590	ND	0	ug/kg	550
Chrysene	40000	ND	0	ug/kg	180		503	ug/kg	190	ND	0	ug/kg	180
3,3'-Dichlorobenzidine	6000	ND	0	ug/kg	1160	ND	0	ug/kg	1260	ND	0	ug/kg	1170
bis(2-Ethylhexyl)phthalate	210000		38700	ug/kg	710		24200	ug/kg	760		68900	ug/kg	710
Di-n-octyl phthalate	10000000	ND	0	ug/kg	710	ND	0	ug/kg	760	BMDL	246	ug/kg	710
Benzo(b)fluoranthene	4000	ND	0	ug/kg	340	BMDL	294	ug/kg	370	ND	0	ug/kg	340
"-o(k)fluoranthene	4000	ND	0	ug/kg	180		263	ug/kg	190	ND	0	ug/kg	180
(a)pyrene	660	ND	0	ug/kg	180		304	ug/kg	190	ND	0	ug/kg	180
Indeno(1,2,3-c,d)pyrene	4000	ND	0	ug/kg	330	ND	0	ug/kg	360	ND	0	ug/kg	330
Dibenzo(a,h)anthracene	660	ND	0	ug/kg	180	ND	0	ug/kg	190	ND	0	ug/kg	180
Benzo(ghi)perylene		ND	0	ug/kg	290	ND	0	ug/kg	310	ND	0	ug/kg	290
Phenol	10000000												
2-Chlorophenol		5200000											
2-Nitrophenol													
2,4-Dimethylphenol	10000000												
2,4-Dichlorophenol		3100000											
p-Chloro-m-cresol													
2,4,6-Trichlorophenol		270000											
2,4-Dinitrophenol		2100000											
4-Nitrophenol													
4,6-Dinitro-o-cresol													
Pentachlorophenol		24000											
Aroclor 1016		2000											
Aroclor 1221		2000											
Aroclor 1242		2000											
Aroclor 1248		2000											
Aroclor 1254		2000											
Aroclor 1260		2000											
Aroclor 1232		2000											
INORGANICS													
Antimony		340000											
Arsenic		2000											
Beryllium		1000											
Cadmium		100000											
chromium		600000											
Lead		600000											
Mercury		270000											

Parameters Not Analyzed

Parameters Not Analyzed

Parameters Not Analyzed

PLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-4A				AEC2-4B				AEC2-5A			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000												
Selenium	3100000												
Silver	4100000												
Thallium	2000												
Zinc	1500000												
		Parameters Not Analyzed				Parameters Not Analyzed				Parameters Not Analyzed			

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BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase II Sampling Summary-AEC 2

PPL ID - - TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-5B				AEC2-6A				AEC2-6B			
		3.5-4'				0-0.5'				3.5-4'			
		DAU614				DAU615				DAU616			
		930629				930629				930629			
Petroleum Hydrocarbons (IR)	10000 (mg/kg)	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
VOLATILE ORGANICS													
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
Chlorodibromomethane	1000000												
Chloromethyl)ether													
Benzene	13000												
1,1,2-Trichloroethane	420000												
trans-1,3-Dichloropropylene	5000												
2-Chloroethylvinyl ether													
Bromoform	370000												
1,1,2,2-Tetrachloroethane	70000												
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine		ND	0 ug/kg	710	ND	0 ug/kg	3700	ND	0 ug/kg	740			
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	400	ND	0 ug/kg	2100	ND	0 ug/kg	420			
1,3-Dichlorobenzene	1000000	ND	0 ug/kg	130	ND	0 ug/kg	690	ND	0 ug/kg	140			
1,4-Dichlorobenzene	1000000	ND	0 ug/kg	310	ND	0 ug/kg	1600	ND	0 ug/kg	320			
1,2-Dichlorobenzene	1000000	ND	0 ug/kg	130	ND	0 ug/kg	690	ND	0 ug/kg	140			
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	710	ND	0 ug/kg	3700	ND	0 ug/kg	740			
Hexachloroethane	100000	ND	0 ug/kg	110	ND	0 ug/kg	580	ND	0 ug/kg	120			
bis(2-Chloroisopropyl)ether	1000000	ND	0 ug/kg	400	ND	0 ug/kg	2100	ND	0 ug/kg	420			
Nitrobenzene	520000	ND	0 ug/kg	130	ND	0 ug/kg	690	ND	0 ug/kg	140			
Isophorone	1000000	ND	0 ug/kg	160	ND	0 ug/kg	800	ND	0 ug/kg	160			
bis(2-Chloroethoxy)methane		ND	0 ug/kg	380	ND	0 ug/kg	1900	ND	0 ug/kg	390			
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	130	ND	0 ug/kg	690	ND	0 ug/kg	140			
Naphthalene	4200000	895	ug/kg	110		647	ug/kg	580		5980	ug/kg	120	
Hexachlorobutadiene	210000	ND	0 ug/kg	64	ND	0 ug/kg	330	ND	0 ug/kg	66			
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	710	ND	0 ug/kg	3700	ND	0 ug/kg	740			
Chloronaphthalene		ND	0 ug/kg	130	ND	0 ug/kg	690	ND	0 ug/kg	140			
Methyl phthalate	10000000	ND	0 ug/kg	350	ND	0 ug/kg	1800	ND	0 ug/kg	370			
Acenaphthylene		ND	0 ug/kg	250	ND	0 ug/kg	1300	ND	0 ug/kg	260			
2,6-Dinitrotoluene		ND	0 ug/kg	130	ND	0 ug/kg	690	ND	0 ug/kg	140			

PLE ID DURTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-5B				AEC2-6A				AEC2-6B			
		3.5-4'			0-0.5'			3.5-4'			3.5-4'		
		DAU614			DAU615			DAU616			DAU616		
		930629			930629			930629			930629		
QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result
Acenaphthene	10000000	1240	ug/kg	130	ND	0	ug/kg	690	2880	ug/kg	140		
2,4-Dinitrotoluene		ND	0	ug/kg	400	ND	0	ug/kg	2100	ND	0	ug/kg	420
Diethyl phthalate	10000000	ND	0	ug/kg	710	ND	0	ug/kg	3700	ND	0	ug/kg	740
Fluorene	10000000		1200	ug/kg	130	ND	0	ug/kg	690		2620	ug/kg	140
4-Chlorophenyl phenyl ether		ND	0	ug/kg	300	ND	0	ug/kg	1500	ND	0	ug/kg	310
1,2-Diphenylhydrazine		ND	0	ug/kg	710	ND	0	ug/kg	3700	ND	0	ug/kg	740
N-Nitrosodiphenylamine	600000	ND	0	ug/kg	130	ND	0	ug/kg	690	ND	0	ug/kg	140
4-Bromophenyl phenyl ether		ND	0	ug/kg	130	ND	0	ug/kg	690	ND	0	ug/kg	140
Hexachlorobenzene	2000	ND	0	ug/kg	130	ND	0	ug/kg	690	ND	0	ug/kg	140
Phenanthrene			3990	ug/kg	380	ND	0	ug/kg	2000		9940	ug/kg	400
Anthracene	10000000		614	ug/kg	130	ND	0	ug/kg	690		1500	ug/kg	140
Di-n-butyl phthalate	10000000		951	ug/kg	710	BMDL	647	ug/kg	3700		10600	ug/kg	740
Fluoranthene	10000		1620	ug/kg	160	ND	0	ug/kg	800		6130	ug/kg	160
Pyrene	10000		1150	ug/kg	130	ND	0	ug/kg	690		4120	ug/kg	140
Benzidine		ND	0	ug/kg	3100	ND	0	ug/kg	16000	ND	0	ug/kg	3200
Butyl benzyl phthalate	10000000	ND	0	ug/kg	710	ND	0	ug/kg	3700	ND	0	ug/kg	740
Benzo(a)anthracene	4000	ND	0	ug/kg	550	ND	0	ug/kg	2900		771	ug/kg	570
Chrysene	40000	ND	0	ug/kg	180	ND	0	ug/kg	910		839	ug/kg	180
3,3'-Dichlorobenzidine	6000	ND	0	ug/kg	1170	ND	0	ug/kg	6030	ND	0	ug/kg	1220
bis(2-Ethylhexyl)phthalate	210000	872000	ug/kg	710		61300	ug/kg	3700	2000000	ug/kg	740		
Di-n-octyl phthalate	10000000		8340	ug/kg	710	ND	0	ug/kg	3700		3930	ug/kg	740
Benzo(b)fluoranthene	4000	ND	0	ug/kg	340	ND	0	ug/kg	1800		388	ug/kg	350
Benzo(k)fluoranthene	4000	ND	0	ug/kg	180	ND	0	ug/kg	910		283	ug/kg	180
o(a)pyrene	660	ND	0	ug/kg	180	ND	0	ug/kg	910		354	ug/kg	180
Indeno(1,2,3-c,d)pyrene	4000	ND	0	ug/kg	330	ND	0	ug/kg	1700	ND	0	ug/kg	350
Dibenzo(a,h)anthracene	660	ND	0	ug/kg	180	ND	0	ug/kg	910	ND	0	ug/kg	180
Benzo(ghi)perylene		ND	0	ug/kg	290	ND	0	ug/kg	1500	ND	0	ug/kg	300
Phenol	10000000												
2-Chlorophenol	5200000												
2-Nitrophenol													
2,4-Dimethylphenol	10000000												
2,4-Dichlorophenol	3100000												
p-Chloro-m-cresol													
2,4,6-Trichlorophenol	270000												
2,4-Dinitrophenol	2100000												
4-Nitrophenol													
4,6-Dinitro-o-cresol													
Pentachlorophenol	24000												
Aroclor 1016	2000												
Aroclor 1221	2000												
Aroclor 1242	2000												
Aroclor 1248	2000												
Aroclor 1254	2000												
Aroclor 1260	2000												
Aroclor 1232	2000												
INORGANICS													
Antimony	340000												
Arsenic	2000												
Beryllium	1000												
Cadmium	100000				Parameters Not Analyzed			Parameters Not Analyzed			Parameters Not Analyzed		
Manganese	600000												
Mercury	600000												
	270000												

Parameters Not Analyzed

Parameters Not Analyzed

Parameters Not Analyzed

LE ID DowTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-5B				AEC2-6A				AEC2-6B			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000												
Selenium	3100000												
Silver	4100000												
Thallium	2000												
Zinc	1500000												
		Parameters Not Analyzed				Parameters Not Analyzed				Parameters Not Analyzed			

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LE ID LocTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-7A 0-0.5'				AEC2-7B 3.5-4'				AEC2-8A 0-0.5'			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)												
VOLATILE ORGANICS													
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
1,1-Dibromomethane	1000000												
1,1-Dimethyl)ether													
Benzene	13000												
1,1,2-Trichloroethane	420000												
trans-1,3-Dichloropropylene	5000												
2-Chloroethylvinyl ether													
Bromoform	370000												
1,1,2,2-Tetrachloroethane	70000												
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine		ND	0 ug/kg	700	ND	0 ug/kg	720	ND	0 ug/kg	7300			
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	400	ND	0 ug/kg	410	ND	0 ug/kg	4200			
1,3-Dichlorobenzene	1000000	ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	1400			
1,4-Dichlorobenzene	1000000	ND	0 ug/kg	310	ND	0 ug/kg	320	ND	0 ug/kg	3200			
1,2-Dichlorobenzene	1000000	ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	1400			
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	700	ND	0 ug/kg	720	ND	0 ug/kg	7300			
Hexachloroethane	100000	ND	0 ug/kg	110	ND	0 ug/kg	120	ND	0 ug/kg	1200			
bis(2-Chloroisopropyl)ether	1000000	ND	0 ug/kg	400	ND	0 ug/kg	410	ND	0 ug/kg	4200			
Nitrobenzene	520000	ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	1400			
Isophorone	1000000	ND	0 ug/kg	150	ND	0 ug/kg	160	ND	0 ug/kg	1600			
bis(2-Chloroethoxy)methane		ND	0 ug/kg	370	ND	0 ug/kg	380	ND	0 ug/kg	3900			
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	1400			
Naphthalene	4200000	ND	0 ug/kg	110		1090 ug/kg	120			39100 ug/kg	1200		
Hexachlorobutadiene	210000	ND	0 ug/kg	63	ND	0 ug/kg	65	ND	0 ug/kg	660			
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	700	ND	0 ug/kg	720	ND	0 ug/kg	7300			
Phenonaphthalene		ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	1400			
Diethyl phthalate	10000000	ND	0 ug/kg	350	ND	0 ug/kg	360	ND	0 ug/kg	3700			
Acenaphthylene		ND	0 ug/kg	240	ND	0 ug/kg	250	ND	0 ug/kg	2600			
2,6-Dinitrotoluene		ND	0 ug/kg	130	ND	0 ug/kg	140	ND	0 ug/kg	1400			

SAMPLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-7A 0-0.5' DAU617 930629				AEC2-7B 3.5-4' DAU618 930629				AEC2-8A 0-0.5' DAU619 930629			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	N
Acenaphthene	10000000	ND	0	ug/kg	130	ND	204	ug/kg	140	ND	22200	ug/kg	
2,4-Dinitrotoluene		ND	0	ug/kg	400	ND	0	ug/kg	410	ND	0	ug/kg	
Diethyl phthalate	10000000	ND	0	ug/kg	700	ND	0	ug/kg	720	ND	0	ug/kg	
Fluorene	10000000	ND	0	ug/kg	130	BMDL	134	ug/kg	140	ND	16500	ug/kg	
4-Chlorophenyl phenyl ether		ND	0	ug/kg	290	ND	0	ug/kg	300	ND	0	ug/kg	
1,2-Diphenylhydrazine		ND	0	ug/kg	700	ND	0	ug/kg	720	ND	0	ug/kg	
N-Nitrosodiphenylamine	600000	ND	0	ug/kg	130	ND	0	ug/kg	140	ND	0	ug/kg	
4-Bromophenyl phenyl ether		ND	0	ug/kg	130	ND	0	ug/kg	140	ND	0	ug/kg	
Hexachlorobenzene	2000	ND	0	ug/kg	130	ND	0	ug/kg	140	ND	0	ug/kg	1
Phenanthrene		ND	0	ug/kg	380	BMDL	336	ug/kg	390	ND	62200	ug/kg	4
Anthracene	10000000	ND	0	ug/kg	130	BMDL	72.3	ug/kg	140	ND	6650	ug/kg	1
Di-n-butyl phthalate	10000000	BMDL	568	ug/kg	700	BMDL	482	ug/kg	720	ND	46300	ug/kg	7
Fluoranthene	10000	ND	0	ug/kg	150		445	ug/kg	160	ND	34100	ug/kg	1
Pyrene	10000	ND	0	ug/kg	130		357	ug/kg	140	ND	23400	ug/kg	1
Benzidine		ND	0	ug/kg	3100	ND	0	ug/kg	3200	ND	0	ug/kg	320
Butyl benzyl phthalate	10000000	ND	0	ug/kg	700	ND	0	ug/kg	720	ND	0	ug/kg	70
Benzo(a)anthracene	4000	ND	0	ug/kg	550	ND	0	ug/kg	560	BMDL	4400	ug/kg	57
Chrysene	40000	ND	0	ug/kg	170	ND	0	ug/kg	180	ND	5060	ug/kg	18
3,3'-Dichlorobenzidine	6000	ND	0	ug/kg	1150	ND	0	ug/kg	1190	ND	0	ug/kg	121
bis(2-Ethylhexyl)phthalate	210000	7080	ug/kg	700		9640	ug/kg	720	ND	1460000	ug/kg	73	
Di-n-octyl phthalate	10000000	ND	0	ug/kg	700	ND	0	ug/kg	720	BMDL	3640	ug/kg	73
Benzo(b)fluoranthene	4000	ND	0	ug/kg	340	ND	0	ug/kg	350	ND	3650	ug/kg	35
Benzo(k)fluoranthene	4000	ND	0	ug/kg	170	ND	0	ug/kg	180	ND	0	ug/kg	18
Benzo(a)pyrene	660	ND	0	ug/kg	170	ND	0	ug/kg	180	ND	0	ug/kg	18
Benzo(1,2,3-c,d)pyrene	4000	ND	0	ug/kg	330	ND	0	ug/kg	340	ND	0	ug/kg	340
Dibenzo(a,h)anthracene	660	ND	0	ug/kg	170	ND	0	ug/kg	180	ND	0	ug/kg	180
Benzo(ghi)perylene		ND	0	ug/kg	290	ND	0	ug/kg	300	ND	0	ug/kg	300
Phenol	10000000												
2-Chlorophenol	5200000												
2-Nitrophenol													
2,4-Dimethylphenol	10000000												
2,4-Dichlorophenol	3100000												
p-Chloro-m-cresol													
2,4,6-Trichlorophenol	270000												
2,4-Dinitrophenol	2100000												
4-Nitrophenol													
4,6-Dinitro-o-cresol													
Pentachlorophenol	24000												
Aroclor 1016	2000												
Aroclor 1221	2000												
Aroclor 1242	2000												
Aroclor 1248	2000												
Aroclor 1254	2000												
Aroclor 1260	2000												
Aroclor 1232	2000												
INORGANICS													
Antimony	340000												
Arsenic	2000												
Beryllium	1000												
Cadmium	100000												
Chromium													
Mercury	600000												
	600000												
	270000												

Parameters Not Analyzed

Parameters Not Analyzed

Parameters Not Analyzed

PLE ID UcPTH	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-7A				AEC2-7B				AEC2-8A			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000												
Selenium	3100000												
Silver	4100000												
Thallium	2000												
Zinc	1500000												
		Parameters Not Analyzed				Parameters Not Analyzed				Parameters Not Analyzed			

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PLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-8B				AEC2-9A				AEC2-9B			
		3.5-4'		0-0.5'		3.5-4'		0-0.5'		3.5-4'		0-0.5'	
		DAU620		DAV802		DAV803		930630		930630		930630	
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)												
VOLATILE ORGANICS													
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
chlorodibromomethane	1000000												
chloromethyl)ether													
benzene	13000												
1,1,2-Trichloroethane	420000												
trans-1,3-Dichloropropylene	5000												
2-Chloroethylvinyl ether													
Bromoform	370000												
1,1,2,2-Tetrachloroethane	70000												
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine		ND	0 ug/kg	730	ND	0 ug/kg	3700	ND	0 ug/kg	690			
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	420	ND	0 ug/kg	2100	ND	0 ug/kg	400			
1,3-Dichlorobenzene	10000000	ND	0 ug/kg	140	ND	0 ug/kg	700	ND	0 ug/kg	130			
1,4-Dichlorobenzene	10000000	ND	0 ug/kg	320	ND	0 ug/kg	1600	ND	0 ug/kg	310			
1,2-Dichlorobenzene	10000000	ND	0 ug/kg	140	ND	0 ug/kg	700	ND	0 ug/kg	130			
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	730	ND	0 ug/kg	3700	ND	0 ug/kg	690			
Hexachloroethane	100000	ND	0 ug/kg	120	ND	0 ug/kg	590	ND	0 ug/kg	110			
bis(2-Chloroisopropyl)ether	10000000	ND	0 ug/kg	420	ND	0 ug/kg	2100	ND	0 ug/kg	400			
Nitrobenzene	520000	ND	0 ug/kg	140	ND	0 ug/kg	700	ND	0 ug/kg	130			
Isophorone	10000000	ND	0 ug/kg	160	ND	0 ug/kg	810	ND	0 ug/kg	150			
bis(2-Chloroethoxy)methane		ND	0 ug/kg	390	ND	0 ug/kg	1900	ND	0 ug/kg	370			
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	140	ND	0 ug/kg	700	ND	0 ug/kg	130			
Naphthalene	4200000	3150 ug/kg	120	BMDL	185 ug/kg	590					817 ug/kg	110	
Hexachlorobutadiene	210000	ND	0 ug/kg	66	ND	0 ug/kg	330	ND	0 ug/kg	62			
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	730	ND	0 ug/kg	3700	ND	0 ug/kg	690			
koronaphthalene		ND	0 ug/kg	140	ND	0 ug/kg	700	ND	0 ug/kg	130			
ethyl phthalate	10000000	ND	0 ug/kg	360	BMDL	707 ug/kg	1800	ND	0 ug/kg	350			
Acenaphthylene		ND	0 ug/kg	260	ND	0 ug/kg	1300	BMDL	35.7 ug/kg	240			
2,6-Dinitrotoluene		ND	0 ug/kg	140	ND	0 ug/kg	700	ND	0 ug/kg	130			

SAMPLE ID PTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-8B				AEC2-9A				AEC2-9B			
		3.5-4'			0-0.5'			3.5-4'			3.5-4'		
		DAU620			DAV802			DAV803			DAV803		
		930629			930630			930630			930630		
QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result
Acenaphthene	10000000	669 ug/kg	140	ND	11000 ug/kg	700	ND	ND	1250 ug/kg	130	ND	ND	ND
2,4-Dinitrotoluene		0 ug/kg	420	ND	0 ug/kg	2100	ND	ND	0 ug/kg	400	ND	ND	ND
Diethyl phthalate	10000000	0 ug/kg	730	ND	0 ug/kg	3700	ND	ND	0 ug/kg	690	ND	ND	ND
Fluorene	10000000	622 ug/kg	140	ND	10600 ug/kg	700	ND	ND	1300 ug/kg	130	ND	ND	ND
4-Chlorophenyl phenyl ether		0 ug/kg	310	ND	0 ug/kg	1500	ND	ND	0 ug/kg	290	ND	ND	ND
1,2-Diphenylhydrazine		0 ug/kg	730	ND	0 ug/kg	3700	ND	ND	0 ug/kg	690	ND	ND	ND
N-Nitrosodiphenylamine	600000	0 ug/kg	140	ND	0 ug/kg	700	ND	ND	0 ug/kg	130	ND	ND	ND
4-Bromophenyl phenyl ether		0 ug/kg	140	ND	0 ug/kg	700	ND	ND	0 ug/kg	130	ND	ND	ND
Hexachlorobenzene	2000	0 ug/kg	140	ND	0 ug/kg	700	ND	ND	0 ug/kg	130	ND	ND	ND
Phenanthrene		2690 ug/kg	390	ND	25800 ug/kg	2000	ND	ND	3790 ug/kg	370	ND	ND	ND
Anthracene	10000000	534 ug/kg	140	ND	12100 ug/kg	700	ND	ND	725 ug/kg	130	ND	ND	ND
Di-n-butyl phthalate	10000000	BMDL	600 ug/kg	730	6240 ug/kg	3700	ND	ND	2510 ug/kg	690	ND	ND	ND
Fluoranthene	10000	2650 ug/kg	160	ND	13500 ug/kg	810	ND	ND	3110 ug/kg	150	ND	ND	ND
Pyrene	10000	1920 ug/kg	140	ND	8600 ug/kg	700	ND	ND	2220 ug/kg	130	ND	ND	ND
Benzidine		0 ug/kg	3200	ND	0 ug/kg	16000	ND	ND	0 ug/kg	3100	ND	ND	ND
Butyl benzyl phthalate	10000000	0 ug/kg	730	ND	0 ug/kg	3700	ND	ND	0 ug/kg	690	ND	ND	ND
Benzo(a)anthracene	4000	BMDL	352 ug/kg	570	BMDL	2140 ug/kg	2900	BMDL	344 ug/kg	540	ND	ND	ND
Chrysene	40000	363 ug/kg	180	ND	2260 ug/kg	920	ND	ND	282 ug/kg	170	ND	ND	ND
3,3'-Dichlorobenzidine	6000	0 ug/kg	1200	ND	0 ug/kg	6040	ND	ND	0 ug/kg	1140	ND	ND	ND
bis(2-Ethylhexyl)phthalate	210000	309000 ug/kg	730	ND	240000 ug/kg	3700	ND	ND	255000 ug/kg	690	ND	ND	ND
Di-n-octyl phthalate	10000000	1440 ug/kg	730	ND	0 ug/kg	3700	ND	ND	2620 ug/kg	690	ND	ND	ND
Benzo(b)fluoranthene	4000	BMDL	339 ug/kg	350	ND	0 ug/kg	1800	BMDL	210 ug/kg	330	ND	ND	ND
Benzo(k)fluoranthene	4000	ND	0 ug/kg	180	ND	0 ug/kg	920	ND	0 ug/kg	170	ND	ND	ND
(a)pyrene	660	BMDL	153 ug/kg	180	ND	0 ug/kg	920	BMDL	102 ug/kg	170	ND	ND	ND
Dibeno(1,2,3-c,d)pyrene	4000	ND	0 ug/kg	340	ND	0 ug/kg	1700	BMDL	43.1 ug/kg	330	ND	ND	ND
Dibenzo(a,h)anthracene	660	ND	0 ug/kg	180	ND	0 ug/kg	920	ND	0 ug/kg	170	ND	ND	ND
Benzo(ghi)perylene		ND	0 ug/kg	300	ND	0 ug/kg	1500	ND	0 ug/kg	280	ND	ND	ND
Phenol	10000000												
2-Chlorophenol	5200000												
2-Nitrophenol													
2,4-Dimethylphenol	10000000												
2,4-Dichlorophenol	3100000												
p-Chloro-m-cresol													
2,4,6-Trichlorophenol	270000												
2,4-Dinitrophenol	2100000												
4-Nitrophenol													
4,6-Dinitro-o-cresol													
Pentachlorophenol	24000												
Aroclor 1016	2000												
Aroclor 1221	2000												
Aroclor 1242	2000												
Aroclor 1248	2000												
Aroclor 1254	2000												
Aroclor 1260	2000												
Aroclor 1232	2000												
INORGANICS													
Antimony	340000												
Arsenic	2000												
Beryllium	1000												
Cadmium	100000												
Chromium	600000												
Lead	600000												
Mercury	270000												

Parameters Not Analyzed

Parameters Not Analyzed

Parameters Not Analyzed

PLE ID LDPTH	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC2-8B				AEC2-9A				AEC2-9B			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000												
Selenium	3100000												
Silver	4100000												
Thallium	2000												
Zinc	1500000												
		Parameters Not Analyzed				Parameters Not Analyzed				Parameters Not Analyzed			

843890102

4.02.3 AEC #3 - Former Organic Waste Incinerator and Dowtherm Boiler Area

An organic waste incinerator was formerly operated at AEC #3 to incinerate wastes from the ester processes. Operations of this incinerator ceased in 1979. Also located within this area was a Dowtherm boiler used for heating reactors in the Batch Ester Plant on the concrete, curbed pad. AEC #3 is presented in Figure 4-3.

Phase I Soil Sampling

Two soil samples were collected from the 0-6" interval below the surface from the area around the Dowtherm boiler's concrete pad and were analyzed for TPH, BN+15 and PCB. The TPH analytical results are below the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The PCB analytical results are also below the NJDEPE's NRDC soil cleanup criteria. The BN+15 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria.

- Benzo(a)pyrene
- N-Nitrosodi-n-propylamine
- Benzo(b)flouranthene

The Phase I analytical results for samples collected in AEC #3 are presented in Table 4.02.3-1 following this discussion.

Phase II Soil Sampling

No sampling was conducted in this AEC pending the completion of facility dismantling activities currently being performed by Taiwan Oil. At this time the remaining Phase II soil samples will be collected and the results will be presented in an Addendum along with the RAA/CUP.

843890103

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 3*

Table 4.02.3-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC3-ADD1 0-0.5' 910312 FC2023	S AEC3-ADD2 0-0.5' 910312 FC2024
Petroleum Hydrocarbons (IR)	10000 mg/kg	116	366
SEMI-VOLATILE ORG.			
Acenaphthene	1000000 ug/kg	< 210	271
Acenaphthylene	ug/kg	< 380	< 380
Anthracene	1000000 ug/kg	< 210	757
Benzidine	ug/kg	< 4800	< 4700
Benzo(a)anthracene	4000 ug/kg	< 850	3280
Benzo(a)pyrene	660 ug/kg	< 270	3330
Benzo(b)fluoranthene	4000 ug/kg	588	5040
Benzo(ghi)perylene	ug/kg	< 450	< 440
Benzo(k)fluoranthene	4000 ug/kg	< 270	< 270
bis(2-Chloroethoxy)methane	ug/kg	< 580	< 570
bis(2-Chloroethyl) ether	3000 ug/kg	< 620	< 610
bis(2-Chloroisopropyl)ether	1000000 ug/kg	< 620	< 610
bis(2-Ethylhexyl)phthalate	210000 ug/kg	2230	< 1100
4-Bromophenyl phenyl ether	ug/kg	< 210	< 200
Butyl benzyl phthalate	1000000 ug/kg	< 1100	< 1100
2-Chloronaphthalene	ug/kg	< 210	< 200
4-Chlorophenyl phenyl ether	ug/kg	< 460	< 450
Chrysene	40000 ug/kg	444	3520
Dibenz(a,h)anthracene	660 ug/kg	< 270	< 270
1,2-Dichlorobenzene	1000000 ug/kg	< 210	< 200
1,3-Dichlorobenzene	1000000 ug/kg	< 210	< 200
1,4-Dichlorobenzene	1000000 ug/kg	< 480	< 470
3,3'-Dichlorobenzidine	6000 ug/kg	< 1810	< 1770
Diethyl phthalate	1000000 ug/kg	< 1100	< 1100
Dimethyl phthalate	1000000 ug/kg	< 1100	< 1100
Di-n-butyl phthalate	1000000 ug/kg	3120	< 1100
2,4-Dinitrotoluene	ug/kg	< 620	< 610
2,6-Dinitrotoluene	ug/kg	< 210	< 200
Di-n-octyl phthalate	1000000 ug/kg	< 1100	< 1100
1,2-Diphenylhydrazine	ug/kg	< 1100	< 1100
Fluoranthene	10000 ug/kg	334	6040
Fluorene	1000000 ug/kg	< 210	227
Hexachlorobenzene	2000 ug/kg	< 210	< 200
Hexachlorobutadiene	210000 ug/kg	< 99	< 97
Hexachlorocyclopentadiene	7300000 ug/kg	< 1100	< 1100
Hexachloroethane	100000 ug/kg	< 180	< 170
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 410	< 400
Isophorone	1000000 ug/kg	< 240	< 240
Naphthalene	4200000 ug/kg	< 180	1190
Nitrobenzene	520000 ug/kg	< 210	< 200
N-Nitrosodimethylamine	660 ug/kg	< 1100	< 1100
N-Nitrosodi-n-propylamine	600000 ug/kg	< 1100	< 1100
N-Nitrosodiphenylamine	ug/kg	< 210	< 200
Phenanthrene	ug/kg	< 590	3720
Pyrene	10000 ug/kg	382	6400
1,2,4-Trichlorobenzene	1200000 ug/kg	< 210	< 200
Aroclor 1016	2000 ug/kg	< 55	< 55
Aroclor 1221	2000 ug/kg	< 55	< 55
Aroclor 1232	2000 ug/kg	< 55	< 55
Aroclor 1242	2000 ug/kg	< 55	< 55
Aroclor 1248	2000 ug/kg	< 55	< 55
Aroclor 1254	2000 ug/kg	< 110	< 110
Aroclor 1260	2000 ug/kg	< 110	< 110

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
The "--" symbol indicates that analysis was not performed for a given analyte.

4.02.4 AEC #4 - Building 1A - Maintenance Stores Waste Oil Storage Tank

AEC #4 encompasses the Maintenance Stores building located adjacent to the Passaic River on the western property border. The building and surrounding area served as a maintenance area with limited storage room availability. Adjacent to this building is a waste oil tank situated on a concrete pad. AEC #4 is presented in Figure 4-4.

Phase I Soil Sampling

One chip sample was collected from the waste oil tank's concrete pad in AEC #4 and analyzed for TPH, BN+15 and PCB. No apparent discharge point exists leading from the edge of the concrete pad, therefore, a soil sample was not required to be collected from this location. The TPH and PCB analytical results are below the NJDEPE's NRDC soil cleanup criteria. The BN+15 analytical results indicate the following constituent exceeded the NJDEPE's NRDC soil cleanup criteria:

- N-Nitrosodi-n-propylamine

The Phase I analytical results for the samples collected in AEC #4 are presented in Table 4.02.4-1 following this discussion.

Phase II Soil Sampling

No sampling was conducted in AEC #4 during Phase II due to a visual inspection of the waste oil containment pad. Our inspection produced no evidence of integrity breaches or flow paths that would allow for contamination of soils surrounding the pad. The photo logs will be provided as an addendum to the Phase II sampling data presentation.

Based upon the data provided a "No Further Action" status is requested for this AEC.

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 4*

Table 4.02.4-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non- Residential Direct Contact Cleanup Standards	X AEC4CH1 Chip 910122 FB9988
Petroleum Hydrocarbons (IR)	10000 mg/kg	3150
SEMI-VOLATILE ORG.		
Acenaphthene	1000000 ug/kg	< 190
Acenaphthylene	ug/kg	< 360
Anthracene	1000000 ug/kg	< 190
Benzidine	ug/kg	< 4500
Benzo(a)anthracene	4000 ug/kg	< 800
Benzo(a)pyrene	660 ug/kg	< 260
Benzo(b)fluoranthene	4000 ug/kg	< 490
Benzo(ghi)perylene	ug/kg	< 420
Benzo(k)fluoranthene	4000 ug/kg	< 260
bis(2-Chloroethoxy)methane	ug/kg	< 540
bis(2-Chloroethyl) ether	3000 ug/kg	< 580
bis(2-Chloroisopropyl)ether	1000000 ug/kg	< 580
bis(2-Ethylhexyl)phthalate	210000 ug/kg	50800
4-Bromophenyl phenyl ether	ug/kg	< 190
Butyl benzyl phthalate	1000000 ug/kg	< 1000
2-Choronaphthalene	ug/kg	< 190
4-Chlorophenyl phenyl ether	ug/kg	< 430
Chrysene	40000 ug/kg	< 260
Dibenz(a,h)anthracene	660 ug/kg	< 260
1,2-Dichlorobenzene	1000000 ug/kg	< 190
1,3-Dichlorobenzene	1000000 ug/kg	< 190
1,4-Dichlorobenzene	1000000 ug/kg	< 450
3,3'-Dichlorobenzidine	6000 ug/kg	< 1690
Diethyl phthalate	1000000 ug/kg	< 1000
Dimethyl phthalate	1000000 ug/kg	< 1000
Di-n-butyl phthalate	1000000 ug/kg	< 1000
2,4-Dinitrotoluene	ug/kg	< 580
2,6-Dinitrotoluene	ug/kg	< 190
Di-n-octyl phthalate	1000000 ug/kg	< 1000
1,2-Diphenylhydrazine	ug/kg	< 1000
Fluoranthene	10000 ug/kg	< 220
Fluorene	1000000 ug/kg	< 190
Hexachlorobenzene	2000 ug/kg	< 190
Hexachlorobutadiene	210000 ug/kg	< 92
Hexachlorocyclopentadiene	7300000 ug/kg	< 1000
Hexachloroethane	100000 ug/kg	< 160
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 380
Isophorone	1000000 ug/kg	< 220
Naphthalene	4200000 ug/kg	< 160
Nitrobenzene	520000 ug/kg	< 190
N-Nitrosodimethylamine	660 ug/kg	< 1000
N-Nitrosodi-n-propylamine	600000 ug/kg	< 190
N-Nitrosodiphenylamine	ug/kg	< 550
Phenanthrene	10000 ug/kg	< 190
Pyrene	1200000 ug/kg	< 190
1,2,4-Trichlorobenzene	2000 ug/kg	< 41
Aroclor 1016	2000 ug/kg	< 41
Aroclor 1221	2000 ug/kg	< 41
Aroclor 1232	2000 ug/kg	< 41
Aroclor 1242	2000 ug/kg	< 41
Aroclor 1248	2000 ug/kg	< 41
Aroclor 1254	2000 ug/kg	< 82
Aroclor 1260	2000 ug/kg	< 82

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
The "-" symbol indicates that analysis was not performed for a given analyte.

4.02.5 AEC #5 - Compactor Area

AEC #5, the Compactor Area, is located immediately adjacent to the Passaic River on the western property border. Refuse and debris were disposed of in this area with subsequent volume reduction using hydraulic compaction. AEC #5 is presented in Figure 4-5.

Phase I Soil Sampling

Two soil samples were collected at AEC #5 and were analyzed for TPH, BN+15, and VO+15. One sample was collected from 0-6" interval below the surface and analyzed for TPH and BN+15. The second sample was collected from the 18-24" interval below the surface (equivalent to 0-6" interval above the water table) and was analyzed for VO+15. The analytical results indicate that the concentration of TPH is at the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The VO+15 analytical results are below the NJDEPE's NRDC soil cleanup criteria. The BN+15 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria:

- Benzo(a)pyrene
- BIS
- N-Nitrosodi-n-propylamine

The Phase I analytical results for samples collected in AEC #5 are presented in Table 4.02.5-1.

Phase II Soil Sampling

Surface soil samples were collected from three locations surrounding the compactor area. Each sample was taken at a depth of 0-6" below the surface and analyzed for TPH and BN+15. The analytical results indicate that the concentrations of the constituents from the TPH and BN+15 analysis are below the NJDEPE's NRDC soil cleanup criteria.

Based upon the analytical results a "No Further Action" status is requested for this AEC.

The Phase II analytical results for samples collected in AEC #5 are presented in Table 4.02.5-2.

843890109

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 5

Table 4.02.5-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AECS-ADD1 0-0.5' 910312 FC2011	S AECS-ADD1A 1.5-2' 910312 FC2012
Petroleum Hydrocarbons (IR)	10000 mg/kg	10000	-
VOLATILE ORGANICS			
Acrolein	ug/kg	-	< 130
Acrylonitrile	5000 ug/kg	-	< 130
Benzene	13000 ug/kg	-	< 5.9
bis(Chloromethyl)ether	ug/kg	-	< 13
Bromoform	370000 ug/kg	-	< 6.3
Carbon tetrachloride	4000 ug/kg	-	< 3.8
Chlorobenzene	680000 ug/kg	-	< 8.1
Chlorodibromomethane	1000000 ug/kg	-	< 4.2
Chloroethane	ug/kg	-	< 13
2-Chloroethylvinyl ether	ug/kg	-	< 13
Chloroform	28000 ug/kg	-	2.89
Dichlorobromomethane	ug/kg	-	< 3.0
Dichlorodifluoromethane	ug/kg	-	< 13
1,1-Dichloroethane	1000000 ug/kg	-	< 6.3
1,2-Dichloroethane	24000 ug/kg	-	< 3.8
1,1-Dichloroethylene	150000 ug/kg	-	< 3.8
1,2-Dichloropropane	43000 ug/kg	-	< 8.1
cis-1,3-Dichloropropylene	5000 ug/kg	-	< 6.7
Ethylbenzene	1000000 ug/kg	-	< 9.7
Methyl bromide	ug/kg	-	< 13
Methyl chloride	ug/kg	-	< 13
Methylene chloride	210000 ug/kg	-	< 3.8
1,1,2,2-Tetrachloroethane	70000 ug/kg	-	< 9.3
Tetrachloroethylene	6000 ug/kg	-	< 5.5
Toluene	1000000 ug/kg	-	< 8.1
1,2-Trans-dichloroethylene	1000000 ug/kg	-	< 2.2
1,1,1-Trichloroethane	420000 ug/kg	-	< 5.1
1,1,2-Trichloroethane	420000 ug/kg	-	< 6.7
Trichloroethylene	54000 ug/kg	-	< 2.6
Trichlorofluoromethane	ug/kg	-	< 13
Vinyl chloride	7000 ug/kg	-	< 13
trans-1,3-Dichloropropylene	5000 ug/kg	-	< 13
SEMI-VOLATILE ORG.			
Acenaphthene	10000000 ug/kg	< 250	-
Acenaphthylene	ug/kg	< 460	-
Anthracene	10000000 ug/kg	434	-
Benzidine	ug/kg	< 5700	-
Benzo(a)anthracene	4000 ug/kg	< 1000	-
Benzo(a)pyrene	660 ug/kg	772	-
Benzo(b)fluoranthene	4000 ug/kg	1380	-
Benzo(ghi)perylene	ug/kg	< 530	-
Benzo(k)fluoranthene	4000 ug/kg	< 330	-
bis(2-Chloroethoxy)methane	ug/kg	< 690	-
bis(2-Chloroethyl) ether	3000 ug/kg	< 740	-
bis(2-Chloroisopropyl)ether	1000000 ug/kg	< 740	-
bis(2-Ethylhexyl)phthalate	210000 ug/kg	3640000	-
4-Bromophenyl phenyl ether	ug/kg	< 250	-
Butyl benzyl phthalate	1000000 ug/kg	< 1300	-
2-Chloronaphthalene	ug/kg	< 250	-
4-Chlorophenyl phenyl ether	ug/kg	< 550	-
Chrysene	40000 ug/kg	3510	-

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
 The "-" symbol indicates that analysis was not performed for a given analyte.

843890110

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 5*

Table 4.02.5-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	SAECS-ADD1 0-0.5' 910312 FC2011	SAECS-ADD1A 1.5-2' 910312 FC2012
Dibenz(a,h)anthracene	660 ug/kg	< 330	-
1,2-Dichlorobenzene	1000000 ug/kg	< 250	-
1,3-Dichlorobenzene	1000000 ug/kg	< 250	-
1,4-Dichlorobenzene	1000000 ug/kg	< 570	-
3,3'-Dichlorobenzidine	6000 ug/kg	< 2150	-
Diethyl phthalate	1000000 ug/kg	< 1300	-
Dimethyl phthalate	1000000 ug/kg	< 1300	-
Di-n-butyl phthalate	1000000 ug/kg	1990	-
2,4-Dinitrotoluene	ug/kg	< 740	-
2,6-Dinitrotoluene	ug/kg	< 250	-
Di-n-octyl phthalate	1000000 ug/kg	< 1300	-
1,2-Diphenylhydrazine	ug/kg	< 1300	-
Fluoranthene	10000 ug/kg	1940	-
Fluorene	1000000 ug/kg	< 250	-
Hexachlorobenzene	2000 ug/kg	< 250	-
Hexachlorobutadiene	210000 ug/kg	< 120	-
Hexachlorocyclopentadiene	7300000 ug/kg	< 1300	-
Hexachloroethane	100000 ug/kg	< 210	-
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 480	-
Isophorone	1000000 ug/kg	< 290	-
Naphthalene	4200000 ug/kg	743	-
Nitrobenzene	520000 ug/kg	< 250	-
N-Nitrosodimethylamine	ug/kg	< 1300	-
N-Nitrosodi-n-propylamine	660 ug/kg	< 1300	-
N-Nitrosodiphenylamine	600000 ug/kg	< 250	-
Phenanthrene	ug/kg	6620	-
Pyrene	10000 ug/kg	17600	-
1,2,4-Trichlorobenzene	1200000 ug/kg	< 250	-

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
The "--" symbol indicates that analysis was not performed for a given analyte.

843890111

PLE ID DEPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC5-1			AEC5-2			AEC5-3					
		0-0.5'			0-0.5'			0-0.5'					
		DAV812			DAV813			DAV814					
		930630			930630			930630					
Petroleum Hydrocarbons (IR)	10000 (mg/kg)	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
VOLATILE ORGANICS			2320	mg/kg	0		559	mg/kg	18.9		3420	mg/kg	17.2
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
1,1-Dibromomethane 1-chloromethyl)ether	1000000												
Benzene	13000												
1,1,2-Trichloroethane	420000												
trans-1,3-Dichloropropylene	5000												
2-Chloroethylvinyl ether													
Bromoform	370000												
1,1,2,2-Tetrachloroethane	70000												
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine		ND	0 ug/kg	780	ND	0 ug/kg	3700	ND	0 ug/kg	690			
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	450	ND	0 ug/kg	2100	ND	0 ug/kg	400			
1,3-Dichlorobenzene	1000000	ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	130			
1,4-Dichlorobenzene	1000000	ND	0 ug/kg	350	ND	0 ug/kg	1600	ND	0 ug/kg	310			
1,2-Dichlorobenzene	1000000	ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	130			
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	780	ND	0 ug/kg	3700	ND	0 ug/kg	690			
Hexachloroethane	100000	ND	0 ug/kg	130	ND	0 ug/kg	590	ND	0 ug/kg	110			
bis(2-Chloroisopropyl)ether	1000000	ND	0 ug/kg	450	ND	0 ug/kg	2100	ND	0 ug/kg	400			
Nitrobenzene	520000	ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	130			
Isophorone	1000000	ND	0 ug/kg	170	ND	0 ug/kg	810	ND	0 ug/kg	150			
bis(2-Chloroethoxy)methane		ND	0 ug/kg	420	ND	0 ug/kg	1900	ND	0 ug/kg	370			
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	130			
Naphthalene	4200000	ND	0 ug/kg	130	BMDL	266 ug/kg	590		287 ug/kg	110			
Hexachlorobutadiene	210000	ND	0 ug/kg	71	ND	0 ug/kg	330	ND	0 ug/kg	62			
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	780	ND	0 ug/kg	3700	ND	0 ug/kg	690			
1,4-noronaphthalene		ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	130			
Diethyl phthalate	1000000	ND	0 ug/kg	390	ND	0 ug/kg	1800	ND	0 ug/kg	350			
Acenaphthylene		ND	0 ug/kg	270	ND	0 ug/kg	1300	BMDL	92.9 ug/kg	240			
2,6-Dinitrotoluene		ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	130			

Parameters Not Analyzed

Parameters Not Analyzed

Parameters Not Analyzed

BASF Corporation

Kearny, New Jersey

ECRA Case #90537

Phase II Sampling Summary-AEC 5

ITLE ID LPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC5-1				AEC5-2				AEC5-3			
		0-0.5'				0-0.5'				0-0.5'			
		DAV812				DAV813				DAV814			
		930630				930630				930630			
QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result
Acenaphthene	10000000	ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	13			
2,4-Dinitrotoluene		ND	0 ug/kg	450	ND	0 ug/kg	2100	ND	0 ug/kg	40			
Diethyl phthalate	10000000	ND	0 ug/kg	780	ND	0 ug/kg	3700	ND	0 ug/kg	69			
Fluorene	10000000	ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	13			
4-Chlorophenyl phenyl ether		ND	0 ug/kg	330	ND	0 ug/kg	1500	ND	0 ug/kg	29			
1,2-Diphenylhydrazine		ND	0 ug/kg	780	ND	0 ug/kg	3700	ND	0 ug/kg	69			
N-Nitrosodiphenylamine	600000	ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	13			
4-Bromophenyl phenyl ether		ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	13			
Hexachlorobenzene	2000	ND	0 ug/kg	150	ND	0 ug/kg	700	ND	0 ug/kg	13			
Phenanthrene		ND	0 ug/kg	420	BMDL	974 ug/kg	2000		1440 ug/kg	37			
Anthracene	10000000	ND	0 ug/kg	150	ND	0 ug/kg	700		223 ug/kg	13			
Di-n-butyl phthalate	10000000	BMDL	639 ug/kg	780	BMDL	853 ug/kg	3700		1490 ug/kg	69			
Fluoranthene	10000	ND	0 ug/kg	170	BMDL	531 ug/kg	810		733 ug/kg	15			
Pyrene	10000	ND	0 ug/kg	150		1200 ug/kg	700		1450 ug/kg	13			
Benzidine		ND	0 ug/kg	3500	ND	0 ug/kg	16000	ND	0 ug/kg	310			
Butyl benzyl phthalate	10000000	ND	0 ug/kg	780	ND	0 ug/kg	3700	ND	0 ug/kg	69			
Benzo(a)anthracene	4000	ND	0 ug/kg	610	ND	0 ug/kg	2900	BMDL	501 ug/kg	54			
Chrysene	40000	ND	0 ug/kg	200	BMDL	733 ug/kg	920		973 ug/kg	17			
3,3'-Dichlorobenzidine	6000	ND	0 ug/kg	1290	ND	0 ug/kg	6040	ND	0 ug/kg	114			
bis(2-Ethylhexyl)phthalate	210000	3100 ug/kg	780		121000 ug/kg		3700		37700 ug/kg	69			
Di-n-octyl phthalate	10000000	ND	0 ug/kg	780	BMDL	3070 ug/kg	3700		1120 ug/kg	69			
Benzo(b)fluoranthene	4000	ND	0 ug/kg	380	BMDL	769 ug/kg	1800		1390 ug/kg	33			
Benzo(k)fluoranthene	4000	ND	0 ug/kg	200	ND	0 ug/kg	920	ND	0 ug/kg	17			
o(a)pyrene	660	ND	0 ug/kg	200	ND	0 ug/kg	920		432 ug/kg	17			
Dibeno(1,2,3-c,d)pyrene	4000	ND	0 ug/kg	370	ND	0 ug/kg	1700	BMDL	321 ug/kg	33			
Dibenzo(a,h)anthracene	660	ND	0 ug/kg	200	ND	0 ug/kg	920	ND	0 ug/kg	17			
Benzo(ghi)perylene		ND	0 ug/kg	320	ND	0 ug/kg	1500		308 ug/kg	28			
Phenol	10000000												
2-Chlorophenol	5200000												
2-Nitrophenol													
2,4-Dimethylphenol	10000000												
2,4-Dichlorophenol	3100000												
p-Chloro-m-cresol													
2,4,6-Trichlorophenol	270000												
2,4-Dinitrophenol	2100000												
4-Nitrophenol													
4,6-Dinitro-o-cresol													
Pentachlorophenol	24000												
Aroclor 1016	2000												
Aroclor 1221	2000												
Aroclor 1242	2000												
Aroclor 1248	2000												
Aroclor 1254	2000												
Aroclor 1260	2000												
Aroclor 1232	2000												
INORGANICS													
Antimony	340000												
Arsenic	2000												
Beryllium	1000												
Cadmium	100000												
Chromium													
Lead	600000												
Mercury	600000												
	270000												

Parameters Not Analyzed

Parameters Not Analyzed

Parameters Not Analyzed

PLE ID LCPTH	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC5-1				AEC5-2				AEC5-3			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000												
Selenium	3100000												
Silver	4100000												
Thallium	2000												
Zinc	1500000												
		Parameters Not Analyzed				Parameters Not Analyzed				Parameters Not Analyzed			

843890114

4.02.6 AEC #6 - Buildings 23 and 23A - Boiler House Area and Basacryl Sump Pit

The Basacryl Sump Pit, AEC #6, is located north of the Building 23 Boiler House and collects wastewater from the batch ester plant and continuous ester plant sumps (K3 and K4) prior to discharge into the wastewater treatment tanks.

Phase I soil sampling was not conducted in this area since it was to be addressed subsequent to the implementation of the decommissioning plan. Details of construction and integrity of the sump pit were to be provided subsequent to decommissioning plan activities as required by the letter dated December 5, 1990. AEC #6 is presented in Figure 4-6.

Phase II Soil Sampling

During decommissioning activities it was noted that the bottom of the sump pit was not intact indicating integrity breaches. One soil sample was taken from an area assumed to be downgradient of the sump pit. This sample was taken at a depth of 3.5-4' and analyzed for TPH and BN+15. The analytical results indicate that the concentrations of the constituents from the TPH and BN+15 analysis are below the NJDEPE's NRDC soil cleanup criteria.

The Phase II analytical results for the sample collected in AEC #6 are presented in Table 4.02.6-1.

Table 4.02.6-1

PLE ID LSTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC6-1			
		QA	Result	Unit	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)		1250	mg/kg	20
VOLATILE ORGANICS					
Methyl chloride					
Methyl bromide					
Dichlorodifluoromethane					
Vinyl chloride	7000				
Chloroethane					
Methylene chloride	210000				
Acrolein					
Acrylonitrile	5000				
Trichlorofluoromethane					
1,1-Dichloroethylene	150000				
1,1-Dichloroethane	1000000				
1,2-Trans-dichloroethylene	1000000				
Chloroform	28000				
1,2-Dichloroethane	24000				
1,1,1-Trichloroethane	420000				
Carbon tetrachloride	4000				
Dichlorobromomethane					
1,1,1,2-Tetrachloroethane	43000				
cis-1,3-Dichloropropylene	5000				
Trichloroethylene	54000				
Chlorodibromomethane	1000000				
Chloromethyl)ether					
benzene	13000				
1,1,2-Trichloroethane	420000				
trans-1,3-Dichloropropylene	5000				
2-Chloroethylvinyl ether					
Bromoform	370000				
1,1,2,2-Tetrachloroethane	70000				
Tetrachloroethylene	6000				
Toluene	1000000				
Chlorobenzene	680000				
Ethylbenzene	1000000				
SEMI-VOLATILE ORG.					
N-Nitrosodimethylamine		ND	0 ug/kg	7500	
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	4300	
1,3-Dichlorobenzene	1000000	ND	0 ug/kg	1400	
1,4-Dichlorobenzene	1000000	ND	0 ug/kg	3300	
1,2-Dichlorobenzene	1000000	ND	0 ug/kg	1400	
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	7500	
Hexachloroethane	100000	ND	0 ug/kg	1200	
bis(2-Chloroisopropyl)ether	1000000	ND	0 ug/kg	4300	
Nitrobenzene	520000	ND	0 ug/kg	1400	
Isophorone	1000000	ND	0 ug/kg	1700	
bis(2-Chloroethoxy)methane		ND	0 ug/kg	4000	
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	1400	
Naphthalene	4200000	BMDL	472 ug/kg	1200	
Hexachlorobutadiene	210000	ND	0 ug/kg	680	
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	7500	
2-Chloronaphthalene		ND	0 ug/kg	1400	
ethyl phthalate	1000000	BMDL	1340 ug/kg	3800	
Acenaphthylene		ND	0 ug/kg	2600	
2,6-Dinitrotoluene		ND	0 ug/kg	1400	

843890116

Table 4.02.6-1

IPLE ID -LPTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC6-1			
		3.5-4'			
		DAU603			
		930628			
QA	Result	Unit	MDL		
Acenaphthene	10000000	ND	0 ug/kg	1400	
2,4-Dinitrotoluene		ND	0 ug/kg	4300	
Diethyl phthalate	10000000	ND	0 ug/kg	7500	
Fluorene	10000000	ND	0 ug/kg	1400	
4-Chlorophenyl phenyl ether		ND	0 ug/kg	3200	
1,2-Diphenylhydrazine		ND	0 ug/kg	7500	
N-Nitrosodiphenylamine	600000	ND	0 ug/kg	1400	
4-Bromophenyl phenyl ether		ND	0 ug/kg	1400	
Hexachlorobenzene	2000	ND	0 ug/kg	1400	
Phenanthrene		BMDL	1740 ug/kg	4100	
Anthracene	10000000	ND	0 ug/kg	1400	
Di-n-butyl phthalate	10000000		13000 ug/kg	7500	
Fluoranthene	10000		2250 ug/kg	1700	
Pyrene	10000		1820 ug/kg	1400	
Benzidine		ND	0 ug/kg	33000	
Butyl benzyl phthalate	10000000	ND	0 ug/kg	7500	
Benzo(a)anthracene	4000	ND	0 ug/kg	5900	
Chrysene	40000	ND	0 ug/kg	1900	
3,3'-Dichlorobenzidine	6000	ND	0 ug/kg	12400	
bis(2-Ethylhexyl)phthalate	210000		32500 ug/kg	7500	
Di-n-octyl phthalate	10000000	ND	0 ug/kg	7500	
Benzo(b)fluoranthene	4000	BMDL	1530 ug/kg	3600	
Benzo(k)fluoranthene	4000	ND	0 ug/kg	1900	
:o(a)pyrene	660	ND	0 ug/kg	1900	
Indeno(1,2,3-c,d)pyrene	4000	ND	0 ug/kg	3500	
Dibenzo(a,h)anthracene	660	ND	0 ug/kg	1900	
Benzo(ghi)perylene		ND	0 ug/kg	3100	
Phenol	10000000	ND	0 ug/kg	1100	
2-Chlorophenol	5200000	ND	0 ug/kg	2500	
2-Nitrophenol		ND	0 ug/kg	2700	
2,4-Dimethylphenol	10000000	ND	0 ug/kg	2000	
2,4-Dichlorophenol	3100000	ND	0 ug/kg	2000	
p-Chloro-m-cresol		ND	0 ug/kg	2300	
2,4,6-Trichlorophenol	270000	ND	0 ug/kg	2000	
2,4-Dinitrophenol	2100000	ND	0 ug/kg	32000	
4-Nitrophenol		ND	0 ug/kg	1800	
4,6-Dinitro-o-cresol		ND	0 ug/kg	18000	
Pentachlorophenol	24000	ND	0 ug/kg	2700	
Aroclor 1016		2000			
Aroclor 1221		2000			
Aroclor 1242		2000			
Aroclor 1248		2000			
Aroclor 1254		2000			
Aroclor 1260		2000			
Aroclor 1232		2000			
INORGANICS					
Antimony	340000				
Arsenic	2000				
Beryllium	1000				
Cadmium	100000				
Radium					
Lead	600000				
Mercury	600000				
	270000				

843890117

Table 4.02.6-1

PLE ID Lab ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC6-1			
		QA	Result	Unit	MDL
Nickel	2400000				
Selenium	3100000				
Silver	4100000				
Thallium	2000				
Zinc	1500000				

843890118

4.02.7 AEC #7 - Electrical Substation Area

AEC #7 is an electrical substation which includes four separate transformers on a concrete pad. The pad is located immediately north of the Basacryl Sump Pit. AEC #7 is presented as Figure 4-7.

Phase I Soil Sampling

Five samples collected in AEC #7; four chip samples and one surface soil sample, were analyzed for TPH and PCB. The TPH and PCB analytical results for the four chip samples are below the NJDEPE's NRDC soil cleanup criteria. The TPH analytical results for the one surface sample is below the NJDEPE's NRDC soil cleanup criteria. The PCB analytical results for the one surface soil sample indicates the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria:

- Aroclor 1016
- Aroclor 1221
- Aroclor 1232
- Aroclor 1242
- Aroclor 1248
- Aroclor 1254
- Aroclor 1260

The Phase I analytical results for samples collected in AEC #7 are presented in Table 4.02.7-1.

Phase II Soil Sampling

Five samples, two surface and three subsurface soil samples, were collected from four locations along the southerly fenceline of the electrical substation. Surface soil

samples AEC 7-1 and AEC 7-3 were taken at 0-6" below the surface and the remaining three samples were taken at 2.5-3' below the surface. All five samples were analyzed for TPH and PCB. The TPH analytical results are below the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The PCB analytical results indicate the following constituents may be present at concentrations exceeding the NJDEPE's NRDC soil cleanup criteria. Aroclor 1232 ranging from 9.01 mg/kg to 23.2 mg/kg and Aroclor 1260 at 2.2 mg/kg. The Phase II analytical results for samples collected in AEC #7 are presented in Table 4.02.7-2.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 7

Table 4.02.7-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC7-ADD1 0-0.5' 910311 FC1944	X AEC7CH1 Chip 910122 FB9987	X AEC7CH2 Chip 910122 FB9986	X AEC7CH3 Chip 910122 FB9985	X AEC7CH4 Chip 910122 FB9984
Petroleum Hydrocarbons (IR)	10000 mg/kg	2440	< 17.5	< 18.3	< 18.1	32.4
SEMI-VOLATILE ORG.						
Aroclor 1016	2000 ug/kg	<11000	< 50	< 45	< 55	< 51
Aroclor 1221	2000 ug/kg	<11000	< 50	< 45	< 55	< 51
Aroclor 1232	2000 ug/kg	<11000	< 50	< 45	< 55	< 51
Aroclor 1242	2000 ug/kg	<11000	< 50	< 45	< 55	< 51
Aroclor 1248	2000 ug/kg	234000	< 50	< 45	< 55	< 51
Aroclor 1254	2000 ug/kg	37700	< 100	< 90	< 110	< 100
Aroclor 1260	2000 ug/kg	<22000	< 100	< 90	< 110	< 100

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

843890121

LE ID L... iH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC7-1				AEC7-2				AEC7-3			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)		469	mg/kg	20		936	mg/kg	20.8		3910	mg/kg	17.5
VOLATILE ORGANICS													
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
Chlorodibromomethane	1000000												
1,1,1,2-Tetrabromoethane													
Benzene	13000												
1,1,2-Trichloroethane	420000												
trans-1,3-Dichloropropylene	5000												
2-Chloroethylvinyl ether													
Bromoform	370000												
1,1,2,2-Tetrachloroethane	70000												
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine													
bis(2-Chloroethyl) ether	3000												
1,3-Dichlorobenzene	1000000												
1,4-Dichlorobenzene	1000000												
1,2-Dichlorobenzene	1000000												
N-Nitrosodi-n-propylamine	660												
Hexachloroethane	100000												
bis(2-Chloroisopropyl)ether	1000000												
Nitrobenzene	520000												
Isophorone	1000000												
bis(2-Chloroethoxy)methane													
1,2,4-Trichlorobenzene	1200000												
Naphthalene	4200000												
Hexachlorobutadiene	210000												
Hexachlorocyclopentadiene	7300000												
? Chloronaphthalene													
Phthalate													
Acenaphthylene													
2,6-Dinitrotoluene	1000000												

Parameters Not Analyzed

LE ID DURTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC7-1				AEC7-2				AEC7-3			
		0-0.5'		2.5-3'		0-0.5'		DAU605		DAU605		930628	
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Acenaphthene	10000000												
2,4-Dinitrotoluene													
Diethyl phthalate	10000000												
Fluorene	10000000												
4-Chlorophenyl phenyl ether													
1,2-Diphenylhydrazine													
N-Nitrosodiphenylamine	600000												
4-Bromophenyl phenyl ether													
Hexachlorobenzene	2000												
Phenanthrene													
Anthracene	10000000												
Di-n-butyl phthalate	10000000												
Fluoranthene	10000												
Pyrene	10000												
Benzidine													
Butyl benzyl phthalate	10000000												
Benzo(a)anthracene	4000												
Chrysene	40000												
3,3'-Dichlorobenzidine	6000												
bis(2-Ethylhexyl)phthalate	210000												
Di-n-octyl phthalate	10000000												
Benzo(b)fluoranthene	4000												
Benzo(k)fluoranthene	4000												
(a)pyrene	660												
Indeno(1,2,3-c,d)pyrene	4000												
Dibenzo(a,h)anthracene	660												
Benzo(ghi)perylene													
Phenol	10000000												
2-Chlorophenol	5200000												
2-Nitrophenol													
2,4-Dimethylphenol	10000000												
2,4-Dichlorophenol	3100000												
p-Chloro-m-cresol													
2,4,6-Trichlorophenol	270000												
2,4-Dinitrophenol	2100000												
4-Nitrophenol													
4,6-Dinitro-o-cresol													
Pentachlorophenol	24000												
Aroclor 1016	2000	ND	0 ug/kg		54	ND	0 ug/kg		54	ND	0 ug/kg		53
Aroclor 1221	2000	ND	0 ug/kg		54	ND	0 ug/kg		54	ND	0 ug/kg		53
Aroclor 1232	2000		23200 ug/kg		54	ND	0 ug/kg		54		16500 ug/kg		53
Aroclor 1242	2000	ND	0 ug/kg		54	ND	0 ug/kg		54	ND	0 ug/kg		53
Aroclor 1248	2000	ND	0 ug/kg		54	ND	0 ug/kg		54	ND	0 ug/kg		53
Aroclor 1254	2000	ND	0 ug/kg		110	ND	0 ug/kg		110	ND	0 ug/kg		110
Aroclor 1260	2000		22200 ug/kg		110	ND	0 ug/kg		110		639 ug/kg		110
INORGANICS													
Antimony	340000												
Arsenic	2000												
Beryllium	1000												
Cadmium	100000												
Cerium													
Lead	600000												
Mercury	600000												
	270000												
Parameters Not Analyzed													

SPL ID L...H LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC7-1				AEC7-2				AEC7-3			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000												
Selenium	3100000												
Silver	4100000												
Thallium	2000												
Zinc	1500000												
		Parameters Not Analyzed				Parameters Not Analyzed				Parameters Not Analyzed			

843890124

SLE ID D.L.C.H LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC7-4				AEC7-5			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)		332	mg/kg	20.5		399	mg/kg	18.7
VOLATILE ORGANICS									
Methyl chloride									
Methyl bromide									
Dichlorodifluoromethane									
Vinyl chloride	7000								
Chloroethane									
Methylene chloride	210000								
Acrolein									
Acrylonitrile	5000								
Trichlorofluoromethane									
1,1-Dichloroethylene	150000								
1,1-Dichloroethane	1000000								
1,2-Trans-dichloroethylene	1000000								
Chloroform	28000								
1,2-Dichloroethane	24000								
1,1,1-Trichloroethane	420000								
Carbon tetrachloride	4000								
Dichlorobromomethane									
1,2-Dichloropropane	43000								
cis-1,3-Dichloropropylene	5000								
Trichloroethylene	54000								
Chlorodibromomethane	1000000								
chloromethyl)ether									
benzene	13000								
1,1,2-Trichloroethane	420000								
trans-1,3-Dichloropropylene	5000								
2-Chloroethylvinyl ether									
Bromoform	370000								
1,1,2,2-Tetrachloroethane	70000								
Tetrachloroethylene	6000								
Toluene	1000000								
Chlorobenzene	680000								
Ethylbenzene	1000000								
SEMI-VOLATILE ORG.									
N-Nitrosodimethylamine									
bis(2-Chloroethyl) ether	3000								
1,3-Dichlorobenzene	1000000								
1,4-Dichlorobenzene	1000000								
1,2-Dichlorobenzene	1000000								
N-Nitrosodi-n-propylamine	660								
Hexachloroethane	100000								
bis(2-Chloroisopropyl)ether	1000000								
Nitrobenzene	520000								
Isophorone	1000000								
bis(2-Chloroethoxy)methane									
1,2,4-Trichlorobenzene	1200000								
Naphthalene	4200000								
Hexachlorobutadiene	210000								
Hexachlorocyclopentadiene	7300000								
~ ~oronaphthalene									
ethyl phthalate	10000000								
Acenaphthylene									
2,6-Dinitrotoluene									

Parameters Not Analyzed

Parameters Not Analyzed

Table 4.02.7-2

SAMPLE ID → TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC7-4				AEC7-5			
		2.5-3'		DAU606 930628	QA Result Unit MDL	2.5-3'		DAU604 930628	QA Result Unit MDL
		QA	Result			Unit	MDL		
Acenaphthene	10000000								
2,4-Dinitrotoluene									
Diethyl phthalate	10000000								
Fluorene	10000000								
4-Chlorophenyl phenyl ether									
1,2-Diphenylhydrazine									
N-Nitrosodiphenylamine	600000								
4-Bromophenyl phenyl ether									
Hexachlorobenzene	2000								
Phenanthrene									
Anthracene	10000000								
Di-n-butyl phthalate	10000000								
Fluoranthene	10000								
Pyrene	10000								
Benzidine									
Butyl benzyl phthalate	10000000								
Benzo(a)anthracene	4000								
Chrysene	40000								
3,3'-Dichlorobenzidine	6000								
bis(2-Ethylhexyl)phthalate	210000								
Di-n-octyl phthalate	10000000								
Benzo(b)fluoranthene	4000								
Benzo(k)fluoranthene	4000								
o(a)pyrene	660								
...-no(1,2,3-c,d)pyrene	4000								
Dibenzo(a,h)anthracene	660								
Benzo(ghi)perylene									
Phenol	10000000								
2-Chlorophenol	5200000								
2-Nitrophenol									
2,4-Dimethylphenol	10000000								
2,4-Dichlorophenol	3100000								
p-Chloro-m-cresol									
2,4,6-Trichlorophenol	270000								
2,4-Dinitrophenol	2100000								
4-Nitrophenol									
4,6-Dinitro-o-cresol									
Pentachlorophenol	24000								
Aroclor 1016	2000	ND	0 ug/kg	100	ND	0 ug/kg	56		
Aroclor 1221	2000	ND	0 ug/kg	100	ND	0 ug/kg	56		
Aroclor 1232	2000	ND	0 ug/kg	100	ND	0 ug/kg	56		
Aroclor 1242	2000	ND	0 ug/kg	100		9010 ug/kg	56		
Aroclor 1248	2000	ND	0 ug/kg	100	ND	0 ug/kg	56		
Aroclor 1254	2000	ND	0 ug/kg	200	ND	0 ug/kg	110		
Aroclor 1260	2000	ND	0 ug/kg	200		636 ug/kg	110		
INORGANICS									
Antimony	340000								
Arsenic	2000								
Beryllium	1000								
Cadmium	100000								
Chromium									
Lead	600000								
Mercury	600000								
	270000								
Parameters Not Analyzed					Parameters Not Analyzed				

Table 4.02.7-2

LE ID LH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC7-4				AEC7-5			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000								
Selenium	3100000								
Silver	4100000								
Thallium	2000								
Zinc	1500000								
		Parameters Not Analyzed				Parameters Not Analyzed			

843890127

4.02.8 AEC #8 - Batch Ester Tank Farm Area

AEC #8 is the Batch Ester Tank Farm located immediately south of the batch ester plant. This area was used to store both raw materials and products for the batch ester plant. The tanks are located on concrete pads and have concrete secondary containment walls surrounding them. This area also includes the foundation of the former Basacryl Plant which is currently covered by gravel. AEC #8 is presented in Figure 4-8.

Phase I Soil Sampling

One soil sample was collected from beneath an area of evident staining for TPH and BN+15 analyses. The depth of this sample was 0-6" below the surface. The analytical results indicate that the concentrations of the constituents from the TPH and BN+15 analysis are below the NJDEPE's NRDC soil cleanup criteria except for the constituent listed below:

- N-Nitrosodi-n-propylamine

The Phase I analytical results for the one soil sample collected at AEC #8 are presented in Table 4.02.8-1.

Phase II Soil Sampling

No samples were taken pending completion of site dismantling activities by Taiwan Oil. Upon completion, a visual inspection and photo documentation of AEC #8 will be performed to determine any integrity breaches in the pavement or concrete. If integrity breaches are found samples will be taken in accordance with the conditions outlined in the NJDEPE's April 21, 1993 Conditional Approval letter.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 8

Table 4.02.8-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC8-ADD1 0-0.5' 910312 FC2008
Petroleum Hydrocarbons (IR)	10000 mg/kg	26.9
SEMI-VOLATILE ORG.		
Acenaphthene	1000000 ug/kg	< 210
Acenaphthylene	ug/kg	< 380
Anthracene	1000000 ug/kg	< 210
Benzidine	ug/kg	< 4800
Benzo(a)anthracene	4000 ug/kg	< 840
Benzo(a)pyrene	660 ug/kg	< 270
Benzo(b)fluoranthene	4000 ug/kg	< 520
Benzo(ghi)perylene	ug/kg	< 440
Benzo(k)fluoranthene	4000 ug/kg	< 270
bis(2-Chloroethoxy)methane	ug/kg	< 570
bis(2-Chloroethyl) ether	3000 ug/kg	< 620
bis(2-Chloroisopropyl)ether	1000000 ug/kg	< 620
bis(2-Ethylhexyl)phthalate	210000 ug/kg	< 1100
4-Bromophenyl phenyl ether	ug/kg	< 210
Butyl benzyl phthalate	1000000 ug/kg	< 1100
2-Chloronaphthalene	ug/kg	< 210
4-Chlorophenyl phenyl ether	ug/kg	< 450
Chrysene	40000 ug/kg	< 270
Dibenzo(a,h)anthracene	660 ug/kg	< 270
1,2-Dichlorobenzene	1000000 ug/kg	< 210
1,3-Dichlorobenzene	1000000 ug/kg	< 210
1,4-Dichlorobenzene	1000000 ug/kg	< 480
3,3'-Dichlorobenzidine	6000 ug/kg	< 1780
Diethyl phthalate	1000000 ug/kg	< 1100
Dimethyl phthalate	1000000 ug/kg	< 1100
Di-n-butyl phthalate	1000000 ug/kg	< 1100
2,4-Dinitrotoluene	ug/kg	< 620
2,6-Dinitrotoluene	ug/kg	< 210
Di-n-octyl phthalate	1000000 ug/kg	< 1100
1,2-Diphenylhydrazine	ug/kg	< 1100
Fluoranthene	10000 ug/kg	< 240
Fluorene	1000000 ug/kg	< 210
Hexachlorobenzene	2000 ug/kg	< 210
Hexachlorobutadiene	210000 ug/kg	< 97
Hexachlorocyclopentadiene	7300000 ug/kg	< 1100
Hexachloroethane	100000 ug/kg	< 170
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 400
Isophorone	1000000 ug/kg	< 240
Naphthalene	4200000 ug/kg	< 170
Nitrobenzene	520000 ug/kg	< 210
N-Nitrosodimethylamine	ug/kg	< 1100
N-Nitrosodi-n-propylamine	660 ug/kg	< 1100
N-Nitrosodiphenylamine	600000 ug/kg	< 210
Phenanthrene	ug/kg	< 580
Pyrene	10000 ug/kg	< 210
1,2,4-Trichlorobenzene	1200000 ug/kg	< 210

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
 The "-" symbol indicates that analysis was not performed for a given analyte.

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4.02.9 AEC #9 - Batch Ester Plant (BEP) Area

AEC #9 is a Batch Ester Plant which produces phthalate ester plasticizers for specialty demand accounts. The facility is located on the northern border of the property. The entire process area is paved with concrete and asphalt. Staining is evident at various locations on the paved areas as a result of minor drips from leaking pumps and joints. AEC #9 is presented in Figure 4-9.

Phase I Soil Sampling

Three soil samples were collected from beneath areas of evident staining in this AEC. One sample was collected from the 0-6" interval below the paved surface and another was collected at the 0-6" interval above the water table. Both samples were analyzed for TPH and BNA+25 which included Acid Extractables (AE) Compounds. The third soil sample was collected from the 18-24" interval below the surface and analyzed for VO+15. The analytical results indicate that the concentrations of the constituents from the VO+15 analysis are below the NJDEPE's NRDC soil cleanup criteria. The BNA+25 analytical results indicate the following constituent exceeding the NJDEPE's NRDC soil cleanup criteria:

- N-Nitrosodi-n-propylamine

The TPH analytical results also exceed the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The Phase I analytical results for AEC #9 are summarized on Table 4.02.9-1.

Phase II Soil Sampling

No further soil sampling was required or performed for AEC #9. Based upon the analytical results a "No Further Action" status is requested for this AEC.

BASF Corporation
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 ECRA Case #90537
 Phase I Sampling Summary - AEC 9

Table 4.02.9-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC9-ADD1 0-0.5' 910312 FC2009	S AEC9-ADD1A 1.5-2' 910312 FC2013	S AEC9-ADD1B 0-0.5' AWT 910312 FC2010
Petroleum Hydrocarbons (IR)	10000 mg/kg	22700	-	7130
VOLATILE ORGANICS				
Acrolein	ug/kg	-	< 1200	-
Acrylonitrile	5000 ug/kg	-	< 1200	-
Benzene	13000 ug/kg	-	< 51	-
bis(Chloromethyl)ether	ug/kg	-	< 120	-
Bromoform	370000 ug/kg	-	< 54	-
Carbon tetrachloride	4000 ug/kg	-	< 32	-
Chlorobenzene	680000 ug/kg	-	< 70	-
Chlorodibromomethane	1000000 ug/kg	-	< 36	-
Chloroethane	ug/kg	-	< 120	-
2-Chloroethylvinyl ether	ug/kg	-	< 120	-
Chloroform	28000 ug/kg	-	< 19	-
Dichlorobromomethane	ug/kg	-	< 26	-
Dichlorodifluoromethane	ug/kg	-	< 120	-
1,1-Dichloroethane	1000000 ug/kg	-	< 54	-
1,2-Dichloroethane	24000 ug/kg	-	< 32	-
1,1-Dichloroethylene	150000 ug/kg	-	< 32	-
1,2-Dichloropropane	43000 ug/kg	-	< 70	-
cis-1,3-Dichloropropylene	5000 ug/kg	-	< 58	-
Ethylbenzene	1000000 ug/kg	-	< 83	-
Methyl bromide	ug/kg	-	< 120	-
Methyl chloride	ug/kg	-	< 120	-
Methylene chloride	210000 ug/kg	-	< 32	-
1,1,2,2-Tetrachloroethane	70000 ug/kg	-	< 80	-
Tetrachloroethylene	6000 ug/kg	-	< 48	-
Toluene	1000000 ug/kg	-	< 70	-
1,2-Trans-dichloroethylene	1000000 ug/kg	-	< 19	-
1,1,1-Trichloroethane	420000 ug/kg	-	< 44	-
1,1,2-Trichloroethane	420000 ug/kg	-	< 58	-
Trichloroethylene	54000 ug/kg	-	< 22	-
Trichlorofluoromethane	ug/kg	-	< 120	-
Vinyl chloride	7000 ug/kg	-	< 120	-
trans-1,3-Dichloropropylene	5000 ug/kg	-	< 120	-
SEMI-VOLATILE ORG.				
Acenaphthene	10000000 ug/kg	< 210	-	229
Acenaphthylene	ug/kg	< 390	-	< 400
Anthracene	10000000 ug/kg	777	-	< 220
Benzidine	ug/kg	< 4900	-	< 5100
Benzo(a)anthracene	4000 ug/kg	< 880	-	< 900
Benzo(a)pyrene	660 ug/kg	< 280	-	< 290
Benzo(b)fluoranthene	4000 ug/kg	< 540	-	< 550
Benzo(ghi)perylene	ug/kg	< 460	-	< 470
Benzo(k)fluoranthene	4000 ug/kg	< 280	-	< 290
bis(2-Chloroethoxy)methane	ug/kg	< 600	-	< 610
bis(2-Chloroethyl) ether	3000 ug/kg	< 640	-	< 660
bis(2-Chloroisopropyl)ether	10000000 ug/kg	< 640	-	< 660
bis(2-Ethylhexyl)phthalate	210000 ug/kg	35300	-	15800
4-Bromophenyl phenyl ether	ug/kg	< 210	-	< 220
Butyl benzyl phthalate	10000000 ug/kg	< 1100	-	< 1100
2-Chloronaphthalene	ug/kg	< 210	-	< 220
4-Chlorophenyl phenyl ether	ug/kg	< 470	-	< 480
Chrysene	40000 ug/kg	< 280	-	328
Dibenzo(a,h)anthracene	660 ug/kg	< 280	-	< 290

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

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 Phase I Sampling Summary - AEC 9

Table 4.02.9-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC9-ADD1 0-0.5' 910312 FC2009	S AEC9-ADD1A 1.5-2' 910312 FC2013	S AEC9-ADD1B 0-0.5' AWT 910312 FC2010
1,2-Dichlorobenzene	1000000 ug/kg	< 210	-	< 220
1,3-Dichlorobenzene	1000000 ug/kg	< 210	-	< 220
1,4-Dichlorobenzene	1000000 ug/kg	< 490	-	< 510
3,3'-Dichlorobenzidine	6000 ug/kg	< 1860	-	< 1900
Diethyl phthalate	10000000 ug/kg	< 1100	-	< 1100
Dimethyl phthalate	10000000 ug/kg	< 1100	-	< 1100
Di-n-butyl phthalate	10000000 ug/kg	57900	-	16900
2,4-Dinitrotoluene	ug/kg	< 640	-	< 660
2,6-Dinitrotoluene	ug/kg	< 210	-	< 220
Di-n-octyl phthalate	10000000 ug/kg	< 1100	-	< 1100
1,2-Diphenylhydrazine	ug/kg	< 1100	-	< 1100
Fluoranthene	10000 ug/kg	324	-	920
Fluorene	10000000 ug/kg	< 210	-	228
Hexachlorobenzene	2000 ug/kg	< 210	-	< 220
Hexachlorobutadiene	210000 ug/kg	< 100	-	< 100
Hexachlorocyclopentadiene	7300000 ug/kg	< 1100	-	< 1100
Hexachloroethane	100000 ug/kg	< 180	-	< 180
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 420	-	< 430
Isophorone	10000000 ug/kg	< 250	-	< 250
Naphthalene	4200000 ug/kg	< 180	-	< 180
Nitrobenzene	520000 ug/kg	< 210	-	< 220
N-Nitrosodimethylamine	ug/kg	< 1100	-	< 1100
N-Nitrosodi-n-propylamine	660 ug/kg	< 1100	-	< 1100
N-Nitrosodiphenylamine	600000 ug/kg	< 210	-	< 220
Phenanthrene	ug/kg	< 610	-	983
Pyrene	10000 ug/kg	341	-	772
1,2,4-Trichlorobenzene	1200000 ug/kg	< 210	-	< 220
2-Chlorophenol	5200000 ug/kg	< 370	-	< 380
2,4-Dichlorophenol	3100000 ug/kg	< 300	-	< 310
2,4-Dimethylphenol	10000000 ug/kg	< 300	-	< 310
4,6-Dinitro-o-cresol	ug/kg	< 2700	-	< 2800
2,4-Dinitrophenol	2100000 ug/kg	< 4700	-	< 4800
2-Nitrophenol	ug/kg	< 400	-	< 410
4-Nitrophenol	ug/kg	< 270	-	< 280
p-Chloro-m-cresol	ug/kg	< 340	-	< 340
Pentachlorophenol	24000 ug/kg	< 400	-	< 410
Phenol	10000000 ug/kg	< 170	-	< 170
2,4,6-Trichlorophenol	270000 ug/kg	< 300	-	< 310

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890132

4.02.10 AEC #10 - Electrical Substation Area

Transformer Nos. 1, 2, 3, and 4

AEC #10 is an electrical substation which contains four separate transformers on a concrete pad. This pad is located immediately north of the Basacryl Sump Pit. AEC #10 is presented in Figure 4-10.

Phase I Soil Sampling

Four chip samples were collected from the concrete pad which held the transformers and analyzed for TPH and PCB analyses. The analytical results indicate that the concentrations of the constituents from the TPH and PCB analysis are below the NJDEPE's NRDC soil cleanup criteria. The Phase I analytical results for AEC #10 are presented in Table 4.02.10-1.

Phase II Soil Sampling

Two surface soil samples were collected along the northerly and easterly fencelines of AEC #10. These samples were taken to a depth of 0-6" below the surface and analyzed for TPH and PCB.

The analytical results indicate that the concentrations of the constituents from the TPH and PCB analysis are below the NJDEPE's NRDC soil cleanup criteria. Based upon the analytical results a "No Further Action" status is requested for this AEC.

The Phase II analytical results for the samples collected in AEC #10 are presented in Table 4.02.10-2.

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 Phase I Sampling Summary - AEC 10

Table 4.02.10-1

SAMPLE ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	X AEC10CH1 Chip 910122 FB9980	X AEC10CH2 Chip 910122 FB9979	X AEC10CH3 Chip 910122 FB9982	X AEC10CH4 Chip 910122 FB9981
Petroleum Hydrocarbons (IR)	10000 mg/kg	170	616	324	663
SEMI-VOLATILE ORG.					
Aroclor 1016	2000 ug/kg	< 51	< 50	< 61	< 53
Aroclor 1221	2000 ug/kg	< 51	< 50	< 61	< 53
Aroclor 1232	2000 ug/kg	< 51	< 50	< 61	< 53
Aroclor 1242	2000 ug/kg	< 51	< 50	< 61	< 53
Aroclor 1248	2000 ug/kg	< 51	< 50	< 61	< 53
Aroclor 1254	2000 ug/kg	< 100	< 100	< 120	< 110
Aroclor 1260	2000 ug/kg	201	301	758	117

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

843890134

PLE ID - TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC10-1				AEC10-2			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)		90.7	mg/kg	18.7		30.2	mg/kg	17.5
VOLATILE ORGANICS									
Methyl chloride									
Methyl bromide									
Dichlorodifluoromethane									
Vinyl chloride	7000								
Chloroethane									
Methylene chloride	210000								
Acrolein									
Acrylonitrile	5000								
Trichlorofluoromethane									
1,1-Dichloroethylene	150000								
1,1-Dichloroethane	1000000								
1,2-Trans-dichloroethylene	1000000								
Chloroform	28000								
1,2-Dichloroethane	24000								
1,1,1-Trichloroethane	420000								
Carbon tetrachloride	4000								
Dichlorobromomethane									
1,2-Dichloropropane	43000								
cis-1,3-Dichloropropylene	5000								
Trichloroethylene	54000								
Chlorodibromomethane	1000000								
(hloromethyl)ether									
benzene	13000								
1,1,2-Trichloroethane	420000								
trans-1,3-Dichloropropylene	5000								
2-Chloroethylvinyl ether									
Bromoform	370000								
1,1,2,2-Tetrachloroethane	70000								
Tetrachloroethylene	6000								
Toluene	1000000								
Chlorobenzene	680000								
Ethylbenzene	1000000								
SEMI-VOLATILE ORG.									
N-Nitrosodimethylamine									
bis(2-Chloroethyl) ether	3000								
1,3-Dichlorobenzene	10000000								
1,4-Dichlorobenzene	10000000								
1,2-Dichlorobenzene	10000000								
N-Nitrosodi-n-propylamine	660								
Hexachloroethane	100000								
bis(2-Chloroisopropyl)ether	10000000								
Nitrobenzene	520000								
Isophorone	10000000								
bis(2-Chloroethoxy)methane									
1,2,4-Trichlorobenzene	1200000								
Naphthalene	4200000								
Hexachlorobutadiene	210000								
Hexachlorocyclopentadiene	7300000								
chloronaphthalene									
ethyl phthalate	10000000								
Acenaphthylene									
2,6-Dinitrotoluene									

PLE ID TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC10-1				AEC10-2			
				0-0.5'				0-0.5'	
				DAV821 930701				DAV822 930701	
		QA	Result	Unit	MDL	QA	Result	Unit	MDL
Acenaphthene	10000000								
2,4-Dinitrotoluene									
Diethyl phthalate	10000000								
Fluorene	10000000								
4-Chlorophenyl phenyl ether									
1,2-Diphenylhydrazine									
N-Nitrosodiphenylamine	600000								
4-Bromophenyl phenyl ether									
Hexachlorobenzene	2000								
Phenanthrene									
Anthracene	10000000								
Di-n-butyl phthalate	10000000								
Fluoranthene	10000								
Pyrene	10000								
Benzidine									
Butyl benzyl phthalate	10000000								
Benzo(a)anthracene	4000								
Chrysene	40000								
3,3'-Dichlorobenzidine	6000								
bis(2-Ethylhexyl)phthalate	210000								
Di-n-octyl phthalate	10000000								
Benzo(b)fluoranthene	4000								
Benzo(k)fluoranthene	4000								
(a)pyrene	660								
undeo(1,2,3-c,d)pyrene	4000								
Dibenzo(a,h)anthracene	660								
Benzo(ghi)perylene									
Phenol	10000000								
2-Chlorophenol	5200000								
2-Nitrophenol									
2,4-Dimethylphenol	10000000								
2,4-Dichlorophenol	3100000								
p-Chloro-m-cresol									
2,4,6-Trichlorophenol	270000								
2,4-Dinitrophenol	2100000								
4-Nitrophenol									
4,6-Dinitro-o-cresol									
Pentachlorophenol	24000								
Aroclor 1016	2000	ND	0 ug/kg	56	ND	0 ug/kg	53		
Aroclor 1221	2000	ND	0 ug/kg	56	ND	0 ug/kg	53		
Aroclor 1232	2000	ND	0 ug/kg	56	ND	0 ug/kg	53		
Aroclor 1242	2000	ND	0 ug/kg	56	ND	0 ug/kg	53		
Aroclor 1248	2000	ND	0 ug/kg	56	ND	0 ug/kg	53		
Aroclor 1254	2000	ND	0 ug/kg	110	ND	0 ug/kg	110		
Aroclor 1260	2000	ND	0 ug/kg	110	ND	0 ug/kg	110		
INORGANICS									
Antimony	340000								
Arsenic	2000								
Beryllium	1000								
Cadmium	100000								
Chromium	600000								
Lead	600000								
Mercury	270000								

Parameters Not Analyzed

Parameters Not Analyzed

Table 4.02.10-2

SPL ID LTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC10-1				AEC10-2			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL
Nickel	2400000								
Selenium	3100000								
Silver	4100000								
Thallium	2000								
Zinc	1500000								
		Parameters Not Analyzed				Parameters Not Analyzed			

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4.02.11 AEC #11 - Maintenance Shop Area

AEC #11 is a maintenance shop located on the northern property border which provided services to the adjacent Continuous Ester Plant. The shop is a concrete block building with a concrete floor. Activities performed here were usually associated with process plumbing and piping alterations.

Phase I soil sampling was not conducted in this area since it was to be addressed subsequent to the implementation of the Decommissioning Plan. As required by the NJDEPE conditional approval letter, locations of sumps, drains or trenches used in the maintenance building were provided subsequent to Decommissioning Plan Activities. A detailed representation of AEC #11 is provided as Figure 4-11.

Phase II Soil Sampling

No sampling was conducted in AEC #11 during Phase II due to a visual inspection of the concrete pavement. Our inspection produced no evidence of integrity breaches or flow paths that would allow for the contamination of soils underlying the concrete pavement. The photo logs will be provided as an addendum to the Phase II Sampling data presentation.

Based upon the inspection a "No Further Action" status is requested for this AEC.

4.02.12 AEC #12 - Continuous Ester Plant Area

AEC #12 is a Continuous Ester Plant which continuously produced BIS. The plant is situated immediately adjacent to the PAA Plant which supplies raw materials to the ester plant. The plant process area is entirely paved with concrete or asphalt. Staining is evident in this area resulting from minor drips. Buildings 12 and 12C were the control room and QC lab for the ester and PAA process. A detailed representation of AEC #12 is provided as Figure 4-12.

Phase I Soil Sampling

Two samples were collected from areas of evident staining. One sample was a chip sample analyzed for TPH and PCB. The second was a surface soil sample collected from the 0-6" interval and analyzed for TPH and BNA+25. The analytical results indicate that the concentration of the constituents from the TPH and PCB analysis are below the NJDEPE's NRDC soil cleanup criteria. The BNA+25 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria:

- Benzo(a)anthracene
- Benzo(a)pyrene
- bis(2-chloroethyl)ether
- BIS
- Dibenzo(a,h) anthracene
- 3,3'-Dichlorobenzidine
- Hexachlorobenzene
- N-Nitrosodi-n-propylamine

The Phase I analytical results for AEC #12 are presented in Table 4.02.12-1.

Phase II Soil Sampling

No sampling was conducted in this AEC pending the completion of facility dismantling activities currently being performed by Taiwan Oil. At this time the remaining Phase II soil samples will be collected and the results will be presented in an Addendum along with the RAA/CUP.

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ECRA Case #90537
Phase I Sampling Summary - AEC 12*

Table 4.02.12-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	X AEC12-ADD1 0-0.5' 910313 FC2101	X AEC12CH1 Chip 910122 FB9983
Petroleum Hydrocarbons (IR)	10000 mg/kg	1360	< 17.6
SEMI-VOLATILE ORG.			
Acenaphthene	10000000 ug/kg	< 1100	-
Acenaphthylene	ug/kg	< 2100	-
Anthracene	10000000 ug/kg	< 1100	-
Benzidine	ug/kg	<26000	-
Benzo(a)anthracene	4000 ug/kg	< 4600	-
Benzo(a)pyrene	660 ug/kg	< 1500	-
Benzo(b)fluoranthene	4000 ug/kg	< 2800	-
Benzo(ghi)perylene	ug/kg	< 2400	-
Benzo(k)fluoranthene	4000 ug/kg	< 1500	-
bis(2-Chloroethoxy)methane	ug/kg	< 3100	-
bis(2-Chloroethyl) ether	3000 ug/kg	< 3400	-
bis(2-Chloroisopropyl)ether	10000000 ug/kg	< 3400	-
bis(2-Ethyhexyl)phthalate	210000 ug/kg	376000	-
4-Bromophenyl phenyl ether	ug/kg	< 1100	-
Butyl benzyl phthalate	10000000 ug/kg	< 5900	-
2-Chloronaphthalene	ug/kg	< 1100	-
4-Chlorophenyl phenyl ether	ug/kg	< 2500	-
Chrysene	40000 ug/kg	< 1500	-
Dibenzo(a,h)anthracene	660 ug/kg	< 1500	-
1,2-Dichlorobenzene	10000000 ug/kg	< 1100	-
1,3-Dichlorobenzene	10000000 ug/kg	< 1100	-
1,4-Dichlorobenzene	10000000 ug/kg	< 2600	-
3,3'-Dichlorobenzidine	6000 ug/kg	< 9770	-
Diethyl phthalate	10000000 ug/kg	< 5900	-
Dimethyl phthalate	10000000 ug/kg	< 5900	-
Di-n-butyl phthalate	10000000 ug/kg	< 5900	-
2,4-Dinitrotoluene	ug/kg	< 3400	-
2,6-Dinitrotoluene	ug/kg	< 1100	-
Di-n-octyl phthalate	10000000 ug/kg	< 5900	-
1,2-Diphenylhydrazine	ug/kg	< 5900	-
Fluoranthene	10000 ug/kg	1480	-
Fluorene	10000000 ug/kg	< 1100	-
Hexachlorobenzene	2000 ug/kg	< 1100	-
Hexachlorobutadiene	210000 ug/kg	< 530	-
Hexachlorocyclopentadiene	7300000 ug/kg	< 5900	-
Hexachloroethane	100000 ug/kg	< 950	-
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 2200	-
Isophorone	10000000 ug/kg	< 1300	-
Naphthalene	4200000 ug/kg	< 950	-
Nitrobenzene	520000 ug/kg	< 1100	-
N-Nitrosodimethylamine	ug/kg	< 5900	-
N-Nitrosodi-n-propylamine	660 ug/kg	< 5900	-
N-Nitrosodiphenylamine	600000 ug/kg	< 1100	-
Phenanthrene	ug/kg	< 3200	-
Pyrene	10000 ug/kg	1400	-
1,2,4-Trichlorobenzene	1200000 ug/kg	< 1100	-
2-Chlorophenol	5200000 ug/kg	< 2000	-
2,4-Dichlorophenol	3100000 ug/kg	< 1600	-
2,4-Dimethylphenol	10000000 ug/kg	< 1600	-
4,6-Dinitro-o-cresol	ug/kg	<14000	-
2,4-Dinitrophenol	2100000 ug/kg	<25000	-
2-Nitrophenol	ug/kg	< 2100	-

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890141

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 12*

Table 4.02.12-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non- Residential Direct Contact Cleanup Standards	X AEC12-ADD1 0-0.5' 910313 FC2101	X AEC12CH1 Chip 910122 FB9983
4-Nitrophenol	ug/kg	< 1400	-
p-Chloro-m-cresol	ug/kg	< 1800	-
Pentachlorophenol	24000 ug/kg	< 2100	-
Phenol	10000000 ug/kg	< 890	-
2,4,6-Trichlorophenol	270000 ug/kg	< 1600	-
Aroclor 1016	2000 ug/kg	-	< 49
Aroclor 1221	2000 ug/kg	-	< 49
Aroclor 1232	2000 ug/kg	-	< 49
Aroclor 1242	2000 ug/kg	-	< 49
Aroclor 1248	2000 ug/kg	-	< 49
Aroclor 1254	2000 ug/kg	-	< 97
Aroclor 1260	2000 ug/kg	-	< 97

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890142

4.02.13 AEC #13 - PAA Plant Area

AEC #13 is the PAA plant located centrally at the facility. This plant produced PAA continuously as a raw material for the continuous and batch ester plants as well as for outside sale. The entire area is paved by concrete or asphalt. Staining is evident on paved areas as a result of minor drips. Transformer #5 is located between building 12C and the continuous ester plant, and also within AEC #13. Transformer #5 is positioned on a curbed concrete pad. The pad has a drain and outlet valve for the discharge of rainwater. Phase I soil sampling was not conducted in this area since it was to be addressed subsequent to the implementation of the decommissioning plan. AEC #13 is presented as Figure 4-13.

Phase II Soil Sampling

No samples were taken pending completion of site dismantling activities by Taiwan Oil. Upon completion, a visual inspection and photo documentation of AEC #13 will be performed to determine any integrity breaches in the pavement or concrete. If integrity breaches are found samples will be taken in accordance with the conditions outlined in the NJDEPE's April 21, 1993 Conditional Approval letter.

4.02.14 AEC #14 - RCRA Incinerator and Scrubber

AEC # 14 consists of the incinerator and scrubber which are located on the east side of the PAA plant. The incinerator was used to incinerate wastes from the PAA process. Operation of this incinerator ceased following the plant closure. Sampling was not conducted in this area during both Phase I and Phase II sampling programs since this area was addressed as part of the facility's RCRA Closure Program. The RCRA Closure Certification Report was submitted to the NJDEPE on October 10, 1991 and the RCRA Closure Certification was received from the NJDEPE on December 16, 1991. AEC #14 is presented as Figure 4-14.

4.02.15 AEC #15 - PAA/CEP Tank Farm Area

AEC #15 is the PAA/CEP Tank Farm which is located immediately adjacent to the Passaic River on the southern portion of the property. This tank farm stored both raw materials and products in steel storage tanks which are positioned on diked concrete pads. Other sections of AEC #15 consist of paved and unpaved gravel areas. AEC #15 is presented in Figure 4-15.

Phase I Sampling Program

Six soil samples from the 0-6" interval were collected at AEC #15, adjacent to areas of evident staining, and analyzed for TPH and BN+15. The TPH analytical results indicate concentrations exceeding the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The BN+15 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)flouranthene
- BIS
- Dibenzo(a,h)anthracene
- N-Nitrosodi-n-propylamine

The PP Metals analytical results indicate the following constituent exceeded the NJDEPE's NRDC soil cleanup criteria:

- Arsenic

The Phase I analytical results for samples collected in AEC #15 are presented in Table 4.02.15-1.

Phase II Sampling Program

No sampling was conducted in this AEC pending the completion of the LNAPL recovery program. Upon termination of the LNAPL recovery program post-remediation sampling will be conducted to ensure the completion of LNAPL recovery in this area.

BASF Corporation
 Kearny, New Jersey
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 Phase I Sampling Summary - AEC 15

Table 4.02.15-1

SAMPLE ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC15-1 0-0.5' 910118 FB9863	S AEC15-2 0-0.5' 910118 FB9864	S AEC15-3 0-0.5' 910118 FB9862	S TP#19 901220 FB9017	S TP#26 901220 FB9043	S TP#26R 901220 FB9813	S TP#28 901220 FB9044	S TP#28R 901220 FB9814
Petroleum Hydrocarbons (IR)	10000 mg/kg	658	693	10400	7480	760	-	3710	-
SEMI-VOLATILE ORG.									
Acenaphthene	1000000 ug/kg	< 230	< 220	< 220	< 210	< 200	< 200	< 210	< 210
Acenaphthylene	ug/kg	< 420	< 410	< 410	< 380	< 370	< 370	< 390	< 390
Anthracene	1000000 ug/kg	859	< 220	< 220	< 210	< 200	< 200	< 210	< 210
Benzidine	ug/kg	< 5300	< 5100	< 5100	< 4800	< 4700	< 4700	< 4900	< 4900
Benzo(a)anthracene	4000 ug/kg	4310	< 910	< 900	< 850	< 840	< 840	< 870	< 870
Benzo(a)pyrene	660 ug/kg	3460	< 290	< 290	< 270	< 270	< 270	< 280	< 280
Benzo(b)fluoranthene	4000 ug/kg	3350	< 560	< 560	< 520	< 510	< 510	< 540	< 540
Benzo(ghi)perylene	ug/kg	2260	< 480	< 470	< 450	< 440	< 440	< 460	< 460
Benzo(k)fluoranthene	4000 ug/kg	< 300	< 290	< 290	< 270	< 270	< 270	< 280	< 280
bis(2-Chloroethoxy)methane	ug/kg	< 640	< 620	< 610	< 580	< 570	< 570	< 590	< 590
bis(2-Chloroethyl) ether	3000 ug/kg	< 680	< 660	< 660	< 620	< 610	< 610	< 640	< 640
bis(2-Chloroisopropyl)ether	1000000 ug/kg	< 680	< 660	< 660	< 620	< 610	< 610	< 640	< 640
bis(2-Ethylhexyl)phthalate	210000 ug/kg	85100	57200	12100000	7200000	4090000	112000	13100000	16300000
4-Bromophenyl phenyl ether	ug/kg	< 230	< 220	< 210	< 200	< 200	< 200	< 210	< 210
Butyl benzyl phthalate	1000000 ug/kg	< 1200	< 1200	< 1100	< 1100	< 1100	< 1100	< 1100	< 1100
2-Chloronaphthalene	ug/kg	< 230	< 220	< 210	< 200	< 200	< 200	< 210	< 210
4-Chlorophenyl phenyl ether	ug/kg	< 500	< 490	< 490	< 460	< 450	< 450	< 470	< 470
Chrysene	40000 ug/kg	5280	< 290	< 290	< 270	< 270	< 270	< 280	< 280
Dibenzo(a,h)anthracene	660 ug/kg	899	< 290	< 290	< 270	< 270	< 270	< 280	< 280
1,2-Dichlorobenzene	1000000 ug/kg	< 230	< 220	< 210	< 200	< 200	< 200	< 210	< 210
1,3-Dichlorobenzene	1000000 ug/kg	< 230	< 220	< 210	< 200	< 200	< 200	< 210	< 210
1,4-Dichlorobenzene	1000000 ug/kg	< 530	< 510	< 510	< 480	< 470	< 470	< 490	< 490
3,3'-Dichlorobenzidine	6000 ug/kg	< 1980	< 1920	< 1910	< 1790	< 1770	< 1770	< 1840	< 1840
Diethyl phthalate	1000000 ug/kg	< 1200	< 1200	< 1200	< 1100	< 1100	< 1100	< 1100	< 1100
Dimethyl phthalate	10000000 ug/kg	< 1200	< 1200	< 1200	< 1100	< 1100	< 1100	< 1100	< 1100
Di-n-butyl phthalate	10000000 ug/kg	1280	1990	< 1200	< 1100	< 1100	< 1100	< 1100	1650
2,4-Dinitrotoluene	ug/kg	< 680	< 660	< 660	< 620	< 610	< 610	< 640	< 640
2,6-Dinitrotoluene	ug/kg	< 230	< 220	< 220	< 210	< 200	< 200	< 210	< 210
Di-n-octyl phthalate	10000000 ug/kg	2730	20500	769000	19400	6210	1590	14300	10400
1,2-Diphenylhydrazine	ug/kg	< 1200	< 1200	< 1200	< 1100	< 1100	< 1100	< 1100	< 1100
Fluoranthene	10000 ug/kg	2810	< 260	271	< 240	< 240	< 240	< 250	317
Fluorene	10000000 ug/kg	< 230	< 220	< 220	< 210	< 200	< 200	< 210	< 210
Hexachlorobenzene	2000 ug/kg	< 230	< 220	< 220	< 210	< 200	< 200	< 210	< 210
Hexachlorobutadiene	210000 ug/kg	< 110	< 100	< 100	< 98	< 96	< 96	< 100	< 100
Hexachlorocyclopentadiene	7300000 ug/kg	< 1200	< 1200	< 1200	< 1100	< 1100	< 1100	< 1100	< 1100

NOTE: Results preceded by a "<" symbol indicate that the result is a non-detect.
 The "-" symbol indicates that analysis was not performed for a given analyte.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 15

Table 4.02.15-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC15-1 0-0.5' 910118 FB9863	S AEC15-2 0-0.5' 910118 FB9864	S AEC15-3 0-0.5' 910118 FB9862	S TP#19 901220 FB9017	S TP#26 901220 FB9043	S TP#26R 901220 FB9813	S TP#28 901220 FB9044	S TP#28R 901220 FB9814
Hexachloroethane	100000 ug/kg	< 190	< 190	< 190	< 170	< 170	< 170	< 180	< 180
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	2960	< 430	< 430	< 400	< 400	< 400	< 410	< 410
Isothorone	10000000 ug/kg	< 260	< 260	873	< 240	< 240	18600	< 250	25500
Naphthalene	4200000 ug/kg	< 190	< 190	< 190	< 170	< 170	< 170	< 180	< 180
Nitrobenzene	520000 ug/kg	< 230	< 220	< 220	< 210	< 200	< 200	< 210	< 210
N-Nitrosodimethylamine	ug/kg	< 1200	< 1200	< 1200	< 1100	< 1100	< 1100	< 1100	< 1100
N-Nitrosodi-n-propylamine	660 ug/kg	< 1200	< 1200	< 1200	< 1000	< 1000	< 1000	< 1000	< 1000
N-Nitrosodiphenylamine	600000 ug/kg	< 230	< 220	< 220	< 210	< 200	< 200	< 210	< 210
Phenanthrene	ug/kg	1520	< 630	< 630	< 590	< 580	< 580	< 600	674
Pyrene	10000 ug/kg	5790	< 220	360	< 210	< 200	< 200	< 210	521
1,2,4-Trichlorobenzene	1200000 ug/kg	< 230	< 220	< 220	< 210	< 200	< 200	< 210	< 210
INORGANICS									
Antimony	340000 ug/kg	-	-	-	< 6500	-	-	-	-
Arsenic	2000 ug/kg	-	-	-	< 3500	-	-	-	-
Beryllium	1000 ug/kg	-	-	-	< 110	-	-	-	-
Cadmium	100000 ug/kg	-	-	-	< 220	-	-	-	-
Chromium	ug/kg	-	-	-	4700	-	-	-	-
Copper	600000 ug/kg	-	-	-	7200	-	-	-	-
Lead	600000 ug/kg	-	-	-	26000	-	-	-	-
Mercury	270000 ug/kg	-	-	-	< 87	-	-	-	-
Nickel	2400000 ug/kg	-	-	-	2600	-	-	-	-
Selenium	3100000 ug/kg	-	-	-	< 540	-	-	-	-
Silver	4100000 ug/kg	-	-	-	< 1100	-	-	-	-
Thallium	2000 ug/kg	-	-	-	< 1100	-	-	-	-
Zinc	1500000 ug/kg	-	-	-	42000	-	-	-	-

NOTE: Results preceded by a "<" symbol indicate that the result is a non-detect.

The "-" symbol indicates that analysis was not performed for a given analyte.

4.02.16 AEC #16 - Former Wastewater Lagoon Area

AEC #16 comprises the area of the former wastewater lagoons. These lagoons were located south of the Wastewater Treatment plant and border on the Passaic River. The lagoons were used to process wastewater prior to treatment. The lagoons were lined earthen structures. AEC #16 is presented in Figure 4-16.

Phase I Sampling Program

A total of fifteen soil samples were collected from AEC #16. Five samples were collected from the 6-12" interval below grade while the remaining samples were collected from the 0-6" interval above the water table. The samples were analyzed for TPH, BNA+25, PCB, and VO+15. The analytical results from the 0.5-1' interval below grade indicate that the TPH, PCB and VO+15 constituents are below the NJDEPE's NRDC soil cleanup criteria. The BNA+25 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)flouranthene
- bis(2-chloroethyl)ether
- Dibenzo(a,h) anthracene
- 3,3'-Dichlorobenzidine
- Hexachlorobenzene
- Indeno(1,2,3-c,d)pyrene
- N-Nitrosodi-n-propylamine
- Benzo(k)flouranthene

The analytical results from the 0-0.5' interval above the water table indicate that the TPH, PCB and VO+15 constituents are below the NJDEPE's NRDC soil cleanup criteria. The BNA+25 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria:

- Benzo(a)anthracene
- Indeno(1,2,3-c,d)pyrene
- Benzo(a)pyrene
- Hexachlorobenzene
- Benzo(b)flouranthene
- N-Nitrosodi-n-propylamine
- Benzo(k)flouranthene
- 3,3'-Dichlorobenzidine
- Dibenzo(a,h)anthracene

Phase I analytical results for the samples collected in AEC #16 are presented in Table 4.02.16-1.

Phase II Sampling Program

No further soil sampling was required or performed for AEC #16.

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 16*

Table 4.02.16-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S B1AAEC16 0.5'-1' 910115 FB9726	S B1BAEC16 0-0.5' AWT 910115 FB9727	S B2AAEC16 0.5'-1' 910115 FB9728	S B2BAEC16 0-0.5' AWT 910115 FB9725	S B3BAEC16 0-0.5' AWT 910115 FB9724	S B4AAEC16 0.5'-1' 910115 FB9723	S B4BAEC16 0-0.5' AWT 910115 FB9729	S SB10AAEC16 0.5'-1' 910117 FB9853
Petroleum Hydrocarbons (IR)	10000 mg/kg	211	362	542	217	623	458	136	122
VOLATILE ORGANICS									
Acrolein	ug/kg	< 110	< 130	< 120	< 160	< 130	< 110	< 130	< 110
Acrylonitrile	5000 ug/kg	< 110	< 130	< 120	< 160	< 130	< 110	< 130	< 110
Benzene	13000 ug/kg	14.4	9.55	13.5	< 7.0	< 5.9	10.1	< 5.6	< 5.0
bis(Chloromethyl)ether	ug/kg	< 11	< 13	< 12	< 16	< 13	< 11	< 13	< 11
Bromoform	370000 ug/kg	< 5.1	< 6.2	< 5.4	< 7.5	< 6.3	< 5.1	< 6.0	< 5.4
Carbon tetrachloride	4000 ug/kg	< 3.1	< 3.7	< 3.2	< 4.5	< 3.7	< 3.1	< 3.6	< 3.2
Chlorobenzene	680000 ug/kg	< 6.6	< 7.9	< 6.9	< 9.6	< 8.0	< 6.6	< 7.6	< 6.8
Chlorodibromomethane	1000000 ug/kg	< 3.4	< 4.1	< 3.6	< 4.9	< 4.1	< 3.4	< 3.9	< 3.5
Chloroethane	ug/kg	< 11	< 13	< 12	< 16	< 13	< 11	< 13	< 11
2-Chloroethylvinyl ether	ug/kg	< 11	< 13	< 12	< 16	< 13	< 11	< 13	< 11
Chloroform	28000 ug/kg	5.06	4.35	8.35	< 2.5	< 2.1	< 1.7	< 2.0	14.5
Dichlorobromomethane	ug/kg	< 2.4	< 2.9	< 2.5	< 3.5	< 2.9	< 2.4	< 2.8	< 2.5
Dichlorodifluoromethane	ug/kg	< 11	< 13	< 12	< 16	< 13	< 11	< 13	< 11
1,1-Dichloroethane	1000000 ug/kg	< 5.1	< 6.2	< 5.4	< 7.5	< 6.3	< 5.1	< 6.0	< 5.4
1,2-Dichloroethane	24000 ug/kg	< 3.1	< 3.7	< 3.2	< 4.5	< 3.7	< 3.1	< 3.6	< 3.2
1,1-Dichloroethylene	150000 ug/kg	< 3.1	< 3.7	< 3.2	< 4.5	< 3.7	< 3.1	< 3.6	< 3.2
1,2-Dichloropropane	43000 ug/kg	< 6.6	< 7.9	< 6.9	< 9.6	< 8.0	< 6.6	< 7.6	< 6.8
cis-1,3-Dichloropropylene	5000 ug/kg	< 5.5	< 6.6	< 5.8	< 8.0	< 6.7	< 5.5	< 6.4	< 5.7
Ethylbenzene	1000000 ug/kg	< 7.9	< 9.5	< 8.3	< 11	< 9.6	< 7.9	< 9.2	< 8.2
Methyl bromide	ug/kg	< 11	< 13	< 12	< 16	< 13	< 11	< 13	< 11
Methyl chloride	ug/kg	< 11	< 13	< 12	< 16	< 13	< 11	< 13	< 11
Methylene chloride	210000 ug/kg	22.8	7.28	27.5	18.1	10.8	18.6	7.13	26.6
1,1,2,2-Tetrachloroethane	70000 ug/kg	< 7.5	< 9.1	< 8.0	< 11	< 9.2	< 7.5	< 8.8	< 7.9
Tetrachloroethylene	6000 ug/kg	5.12	< 5.4	< 4.7	< 6.5	< 5.5	< 4.5	< 5.2	< 4.7
Toluene	1000000 ug/kg	< 6.6	< 7.9	7.77	< 9.6	< 8.0	< 6.6	< 7.6	< 6.8
1,2-Trans-dichloroethylene	1000000 ug/kg	< 1.8	< 2.1	< 1.9	< 2.5	< 2.1	< 1.7	< 2.0	< 1.8
1,1,1-Trichloroethane	420000 ug/kg	< 4.2	< 5.0	< 4.4	< 6.1	< 5.1	< 4.1	< 4.8	< 4.3
1,1,2-Trichloroethane	420000 ug/kg	< 5.5	< 6.6	< 5.8	< 8.0	< 6.7	< 5.5	< 6.4	< 5.7
Trichloroethylene	54000 ug/kg	< 2.1	< 2.5	< 2.2	< 3.0	< 2.5	< 2.1	< 2.4	< 2.2
Trichlorofluoromethane	ug/kg	< 11	< 13	< 12	< 16	< 13	< 11	< 13	< 11
Vinyl chloride	7000 ug/kg	29.8	< 13	< 12	< 16	< 13	< 11	< 13	< 11
trans-1,3-Dichloropropylene	5000 ug/kg	< 11	< 13	< 12	< 16	< 13	< 11	< 13	< 11
SEMI-VOLATILE ORG.									
Acenaphthene	1000000 ug/kg	< 210	705	< 220	1270	373	< 210	318	< 2200
Acenaphthylene	ug/kg	< 380	< 460	< 400	< 550	617	< 380	< 440	< 4000

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
The "-" symbol indicates that analysis was not performed for a given analyte.

BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 16

Table 4.02.16-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S B1AAEC16 0.5-1' 910115 FB9726	S B1BAEC16 0-0.5' AWT 910115 FB9727	S B2AAEC16 0.5-1' 910115 FB9728	S B2BAEC16 0-0.5' AWT 910115 FB9725	S B3BAEC16 0-0.5' AWT 910115 FB9724	S B4AAEC16 0.5-1' 910115 FB9723	S B4BAEC16 0-0.5' AWT 910115 FB9729	S SB10AAEC16 0.5-1' 910117 FB9853
Anthracene	1000000 ug/kg	< 210	862	< 220	691	710	< 210	< 240	< 2200
Benzidine	ug/kg	< 4800	< 5800	< 5100	< 7000	< 5800	< 4800	< 5600	< 50000
Benzo(a)anthracene	4000 ug/kg	< 850	480	< 900	3010	5060	< 850	< 990	< 8800
Benzo(a)pyrene	660 ug/kg	< 270	5560	< 290	2560	5200	< 270	< 320	< 2900
Benzo(b)fluoranthene	4000 ug/kg	< 520	5350	< 550	1450	5380	< 520	< 610	< 5400
Benzo(ghi)perylene	ug/kg	< 450	3460	< 470	1330	4910	< 450	< 520	< 4600
Benzo(k)fluoranthene	4000 ug/kg	< 270	2850	< 290	1890	4620	< 270	< 320	< 2800
bis(2-Chloroethoxy)methane	ug/kg	< 580	< 700	< 610	< 840	< 700	< 580	< 670	< 6000
bis(2-Chloroethyl) ether	3000 ug/kg	< 620	< 750	< 660	< 900	< 760	< 620	< 720	< 6500
bis(2-Chloroisopropyl)ether	10000000 ug/kg	< 620	< 750	< 660	< 900	< 760	< 620	< 720	< 6500
bis(2-Ethylhexyl)phthalate	210000 ug/kg	4020	1760	4900	< 1600	< 1300	4070	< 1300	< 11000
4-Bromophenyl phenyl ether	ug/kg	< 210	< 250	< 220	< 300	< 250	< 210	< 240	< 2200
Butyl benzyl phthalate	10000000 ug/kg	< 1100	< 1300	< 1200	< 1600	< 1300	< 1100	< 1300	< 11000
2-Chloronaphthalene	ug/kg	< 210	< 250	< 220	< 300	< 250	< 210	< 240	< 2200
4-Chlorophenyl phenyl ether	ug/kg	< 460	< 550	< 480	< 660	< 560	< 460	< 530	< 4800
Chrysene	40000 ug/kg	< 270	5850	< 290	3460	6780	< 270	< 320	< 2800
Dibenzo(a,h)anthracene	660 ug/kg	< 270	1180	< 290	< 400	1820	< 270	< 320	< 2800
1,2-Dichlorobenzene	1000000 ug/kg	< 210	< 250	< 220	< 300	< 250	< 210	< 240	< 2200
1,3-Dichlorobenzene	1000000 ug/kg	< 210	< 250	< 220	< 300	< 250	< 210	< 240	< 2200
1,4-Dichlorobenzene	1000000 ug/kg	< 480	< 580	< 510	< 700	< 580	< 480	< 560	< 5000
3,3'-Dichlorobenzidine	6000 ug/kg	< 1790	< 2170	< 1900	< 2610	< 2190	< 1800	< 2090	< 18700
Diethyl phthalate	1000000 ug/kg	< 1100	< 1300	< 1200	< 1600	< 1300	< 1100	< 1300	< 11000
Dimethyl phthalate	1000000 ug/kg	1130	< 1300	3280	< 1600	< 1300	1450	< 1300	< 11000
Di-n-butyl phthalate	1000000 ug/kg	< 1100	< 1300	3030	4720	< 1300	< 1100	< 1300	< 11000
2,4-Dinitrotoluene	ug/kg	< 620	< 750	< 660	< 900	< 760	< 620	< 720	< 6500
2,6-Dinitrotoluene	ug/kg	< 210	< 250	< 220	< 300	< 250	< 210	< 240	< 2200
Di-n-octyl phthalate	1000000 ug/kg	< 1100	< 1300	< 1200	< 1600	< 1300	< 1100	< 1300	< 11000
1,2-Diphenylhydrazine	ug/kg	< 1100	< 1300	< 1200	< 1600	< 1300	< 1100	< 1300	< 11000
Fluoranthene	10000 ug/kg	320	5480	261	4880	5180	260	< 280	< 2500
Fluorene	10000000 ug/kg	< 210	< 250	< 220	< 300	< 250	< 210	< 240	< 2200
Hexachlorobenzene	2000 ug/kg	< 210	< 250	< 220	< 300	< 250	< 210	< 240	< 2200
Hexachlorobutadiene	210000 ug/kg	< 98	< 120	< 100	< 140	< 120	< 98	< 110	< 1000
Hexachlorocyclopentadiene	7300000 ug/kg	< 1100	< 1300	< 1200	< 1600	< 1300	< 1100	< 1300	< 11000
Hexachloroethane	100000 ug/kg	< 170	< 210	< 180	< 250	< 210	< 170	< 200	< 1800
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 400	3740	< 430	1370	5170	< 400	< 470	< 4200
Isophorone	10000000 ug/kg	< 240	< 290	< 250	< 350	< 290	< 240	< 280	< 2500
Naphthalene	4200000 ug/kg	< 170	1330	225	491	784	529	< 200	< 1800

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S B1AAEC16 0.5'-1' 910115 FB9726	S B1BAEC16 0-0.5' AWT 910115 FB9727	S B2AAEC16 0.5'-1' 910115 FB9728	S B2BAEC16 0-0.5' AWT 910115 FB9725	S B3BAEC16 0-0.5' AWT 910115 FB9724	S B4AAEC16 0.5'-1' 910115 FB9723	S B4BAEC16 0-0.5' AWT 910115 FB9729	S SB1AAEC16 0.5'-1' 910117 FB9853
Nitrobenzene	520000 ug/kg	595	< 250	1450	< 300	< 250	460	< 240	< 2200
N-Nitrosodimethylamine	ug/kg	< 1100	< 1300	< 1200	< 1600	< 1300	< 1100	< 1300	< 11000
N-Nitrosodi-n-propylamine	660 ug/kg	< 1000	< 1300	< 1200	< 1600	< 1300	< 1100	< 1300	< 11000
N-Nitrosodiphenylamine	600000 ug/kg	< 210	< 250	< 220	< 300	< 250	< 210	< 240	< 2200
Phenanthrene	ug/kg	< 590	996	< 620	< 850	756	< 590	< 680	< 6100
Pyrene	10000 ug/kg	395	6390	235	6520	6280	228	374	< 2200
1,2,4-Trichlorobenzene	1200000 ug/kg	< 210	< 250	< 220	< 300	< 250	< 210	< 240	< 2200
2-Chlorophenol	5200000 ug/kg	< 360	< 430	< 380	< 520	< 440	< 360	< 420	< 3700
2,4-Dichlorophenol	3100000 ug/kg	< 290	< 360	< 310	< 430	< 360	< 290	< 340	< 3100
2,4-Dimethylphenol	10000000 ug/kg	< 290	< 360	< 310	< 430	< 360	< 290	< 340	< 3100
4,6-Dinitro-o-cresol	ug/kg	< 2600	< 3200	< 2800	< 3800	< 3200	< 2600	< 3000	< 27000
2,4-Dinitrophenol	2100000 ug/kg	< 4600	< 5500	< 4800	< 6600	< 5600	< 4600	< 5300	< 48000
2-Nitrophenol	ug/kg	< 390	< 470	< 420	< 570	< 480	< 390	< 460	< 4100
4-Nitrophenol	ug/kg	< 260	< 320	< 280	< 380	< 320	< 260	< 300	< 2700
p-Chloro-m-cresol	ug/kg	< 330	< 400	< 350	< 470	< 400	< 330	< 380	< 3400
Pentachlorophenol	24000 ug/kg	< 390	< 470	< 420	< 570	< 480	< 390	< 460	< 4100
Phenol	10000000 ug/kg	< 160	< 200	< 170	< 240	< 200	< 160	< 190	< 1700
2,4,6-Trichlorophenol	270000 ug/kg	< 290	< 360	< 310	< 430	< 360	< 290	< 340	< 3100
Aroclor 1016	2000 ug/kg	< 54	< 65	< 58	< 80	< 66	< 54	< 63	< 52
Aroclor 1221	2000 ug/kg	< 54	< 65	< 58	< 80	< 66	< 54	< 63	< 52
Aroclor 1232	2000 ug/kg	< 54	< 65	< 58	< 80	< 66	< 54	< 63	< 52
Aroclor 1242	2000 ug/kg	< 54	< 65	< 58	< 80	< 66	< 54	< 63	< 52
Aroclor 1248	2000 ug/kg	< 54	< 65	< 58	< 80	< 66	< 54	< 63	< 52
Aroclor 1254	2000 ug/kg	< 110	< 130	< 120	< 160	< 130	1940	< 130	< 100
Aroclor 1260	2000 ug/kg	< 110	< 130	< 120	< 160	< 130	< 110	< 130	< 100

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 16

Table 4.02.16-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S SB10BAEC16 0-0.5' AWT 910117 FB9854	S SB5BAEC16 0-0.5' AWT 910116 FB9783	S SB6BAEC16 0-0.5' AWT 910116 FB9784	S SB7BAEC16 0-0.5' AWT 910117 FB9849	S SB8AAEC16 0.5-1' 910117 FB9850	S SB8BAEC16 0-0.5' AWT 910117 FB9851	S SB9BAEC16 0-0.5' AWT 910117 FB9852
Petroleum Hydrocarbons (IR)	10000 mg/kg	-	-	-	-	-	-	-
VOLATILE ORGANICS								
Acrolein	ug/kg	< 120	< 140	< 120	< 160	< 150	< 170	< 130
Acrylonitrile	5000 ug/kg	< 120	< 140	< 120	< 160	< 150	< 170	< 130
Benzene	13000 ug/kg	< 5.3	< 6.1	< 5.4	15.3	< 6.6	< 7.6	< 5.8
bis(Chloromethyl)ether	ug/kg	< 12	< 14	< 12	< 16	< 15	< 17	< 13
Bromoform	370000 ug/kg	< 5.6	< 6.5	< 5.7	< 7.7	< 7.1	< 8.1	< 6.2
Carbon tetrachloride	4000 ug/kg	< 3.4	< 3.9	< 3.4	< 4.6	< 4.2	< 4.8	< 3.7
Chlorobenzene	680000 ug/kg	< 7.2	< 8.3	< 7.3	< 9.8	< 9.0	< 10	< 7.9
Chlorodibromomethane	1000000 ug/kg	< 3.7	< 4.3	< 3.8	< 5.1	< 4.7	< 5.3	< 4.1
Chloroethane	ug/kg	< 12	< 14	< 12	< 16	< 15	< 17	< 13
2-Chloroethylvinyl ether	ug/kg	< 12	< 14	< 12	< 16	< 15	< 17	< 13
Chloroform	28000 ug/kg	< 1.9	< 2.2	< 1.9	< 2.6	< 2.4	< 2.7	< 2.1
Dichlorobromomethane	ug/kg	< 2.6	< 3.0	< 2.7	< 3.6	< 3.3	< 3.8	< 2.9
Dichlorodifluoromethane	ug/kg	< 12	< 14	< 12	< 16	< 15	< 17	< 13
1,1-Dichloroethane	1000000 ug/kg	< 5.6	< 6.5	< 5.7	< 7.7	< 7.1	< 8.1	< 6.2
1,2-Dichloroethane	24000 ug/kg	< 3.4	< 3.9	< 3.4	< 4.6	< 4.2	< 4.8	< 3.7
1,1-Dichloroethylene	150000 ug/kg	< 3.4	< 3.9	< 3.4	< 4.6	< 4.2	< 4.8	< 3.7
1,2-Dichloropropane	43000 ug/kg	< 7.2	< 8.3	< 7.3	< 9.8	< 9.0	< 10	< 7.9
cis-1,3-Dichloropropylene	5000 ug/kg	< 6.0	< 6.9	< 6.1	< 8.2	< 7.5	< 8.6	< 6.6
Ethylbenzene	1000000 ug/kg	< 8.7	< 9.9	< 8.8	< 12	< 11	< 12	< 9.5
Methyl bromide	ug/kg	< 12	< 14	< 12	< 16	< 15	< 17	< 13
Methyl chloride	ug/kg	< 12	< 14	< 12	< 16	< 15	< 17	< 13
Methylene chloride	210000 ug/kg	18.4	10.1	5.41	30.5	< 4.2	13.3	15.3
1,1,2,2-Tetrachloroethane	70000 ug/kg	< 8.3	< 9.5	< 8.4	< 11	< 10	< 12	< 9.1
Tetrachloroethylene	6000 ug/kg	< 4.9	< 5.6	< 5.0	< 6.7	< 6.2	< 7.0	< 5.4
Toluene	1000000 ug/kg	< 7.2	< 8.3	< 7.3	14.4	< 9.0	< 10	< 7.9
1,2-Trans-dichloroethylene	1000000 ug/kg	< 1.9	< 2.2	< 1.9	< 2.6	< 2.4	< 2.7	< 2.1
1,1,1-Trichloroethane	420000 ug/kg	< 4.6	< 5.2	< 4.6	< 6.2	< 5.7	< 6.5	< 5.0
1,1,2-Trichloroethane	420000 ug/kg	< 6.0	< 6.9	< 6.1	< 8.2	< 7.5	< 8.6	< 6.6
Trichloroethylene	54000 ug/kg	< 2.3	< 2.6	< 2.3	< 3.1	< 2.9	< 3.3	< 2.5
Trichlorofluoromethane	ug/kg	< 12	< 14	< 12	< 16	< 15	< 17	< 13
Vinyl chloride	7000 ug/kg	< 12	< 14	< 12	< 16	< 15	< 17	< 13
trans-1,3-Dichloropropylene	5000 ug/kg	< 12	< 14	< 12	< 16	< 15	< 17	< 13
SEMI-VOLATILE ORG.								
Acenaphthene	10000000 ug/kg	< 230	284	< 230	< 3100	< 290	< 330	< 250
Acenaphthylene	ug/kg	< 420	< 480	< 420	< 5700	< 530	< 12000	< 460

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S SB10BAEC16 0-0.5' AWT 910117 FB9854	S SB5BAEC16 0-0.5' AWT 910116 FB9783	S SB6BAEC16 0-0.5' AWT 910116 FB9784	S SB7BAEC16 0-0.5' AWT 910117 FB9849	S SB8AAEC16 0.5-1' 910117 FB9850	S SB8BAEC16 0-0.5' AWT 910117 FB9851	S SB9BAEC16 0-0.5' AWT 910117 FB9852
Anthracene	1000000 ug/kg	< 230	739	< 230	< 3100	387	555	< 250
Benzidine	ug/kg	< 5300	< 6000	< 5300	< 72000	< 6600	< 150000	< 5800
Benzo(a)anthracene	4000 ug/kg	1450	3990	< 940	< 13000	1200	1840	< 1000
Benzo(a)pyrene	660 ug/kg	1690	5970	< 300	6720	1140	2030	< 330
Benzo(b)fluoranthene	4000 ug/kg	2270	4230	< 580	9610	1390	3640	< 630
Benzo(ghi)perylene	ug/kg	< 490	3900	< 500	< 6700	< 620	1460	< 540
Benzo(k)fluoranthene	4000 ug/kg	< 300	4440	< 300	< 1100	1100	< 1600	< 330
bis(2-Chloroethoxy)methane	ug/kg	< 640	< 730	< 640	< 8600	< 800	< 910	< 700
bis(2-Chloroethyl) ether	3000 ug/kg	< 680	< 780	< 690	< 9300	< 860	< 980	< 750
bis(2-Chloroisopropyl)ether	10000000 ug/kg	< 680	< 780	< 690	< 9300	< 860	< 980	< 750
bis(2-Ethylhexyl)phthalate	210000 ug/kg	< 1200	< 1400	< 1200	< 16000	< 1500	3550	< 1300
4-Bromophenyl phenyl ether	ug/kg	< 230	< 260	< 230	< 3100	< 290	< 330	< 250
Butyl benzyl phthalate	10000000 ug/kg	< 1200	< 1400	< 1200	< 16000	< 1500	< 1700	< 1300
2-Chloronaphthalene	ug/kg	< 230	< 260	< 230	< 3100	< 290	< 330	< 250
4-Chlorophenyl phenyl ether	ug/kg	< 500	< 580	< 510	< 6900	< 630	< 720	< 550
Chrysene	40000 ug/kg	1820	5180	< 300	8550	1600	2670	< 330
Dibenzo(a,h)anthracene	660 ug/kg	< 300	1180	< 300	< 4100	< 380	459	< 330
1,2-Dichlorobenzene	10000000 ug/kg	< 230	< 260	< 230	< 3100	< 290	< 330	< 250
1,3-Dichlorobenzene	10000000 ug/kg	< 230	< 260	< 230	< 3100	< 290	< 330	< 250
1,4-Dichlorobenzene	10000000 ug/kg	< 530	< 600	< 530	< 7200	< 660	< 750	< 580
3,3'-Dichlorobenzidine	6000 ug/kg	< 1980	< 2260	< 2000	< 26900	< 2480	< 2830	< 2170
Diethyl phthalate	10000000 ug/kg	< 1200	< 1400	< 1200	< 16000	< 1500	< 1700	< 1300
Dimethyl phthalate	10000000 ug/kg	< 1200	< 1400	< 1200	< 16000	< 1500	< 1700	< 1300
Di-n-butyl phthalate	10000000 ug/kg	1740	< 1400	< 1200	< 16000	< 1500	< 1700	< 1300
2,4-Dinitrotoluene	ug/kg	< 680	< 780	< 690	< 9300	< 860	< 980	< 750
2,6-Dinitrotoluene	ug/kg	< 230	< 260	< 230	< 3100	< 290	< 330	< 250
Di-n-octyl phthalate	10000000 ug/kg	< 1200	< 1400	< 1200	< 16000	< 1500	< 34000	< 1300
1,2-Diphenyldiazine	ug/kg	< 1200	< 1400	< 1200	< 16000	< 1500	< 1700	< 1300
Fluoranthene	10000 ug/kg	1310	3220	375	15900	1380	2790	< 290
Fluorene	10000000 ug/kg	< 230	< 260	< 230	< 3100	< 290	< 6500	< 250
Hexachlorobenzene	2000 ug/kg	< 230	< 260	< 230	< 3100	< 290	< 330	< 250
Hexachlorobutadiene	210000 ug/kg	< 110	< 120	< 110	< 1500	< 140	< 150	< 120
Hexachlorocyclopentadiene	7300000 ug/kg	< 1200	< 1400	< 1200	< 16000	< 1500	< 1700	< 1300
Hexachloroethane	100000 ug/kg	< 190	< 220	< 190	< 2600	< 240	< 270	< 210
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 440	4330	< 450	< 6000	< 560	1790	< 490
Isophorone	10000000 ug/kg	< 260	< 300	< 270	< 3600	< 330	< 380	< 290
Naphthalene	4200000 ug/kg	300	1050	< 190	4940	1230	1780	< 210

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
 The "--" symbol indicates that analysis was not performed for a given analyte.

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S SB10BAEC16 0-0.5' AWT 910117 FB9854	S SB5BAEC16 0-0.5' AWT 910116 FB9783	S SB6BAEC16 0-0.5' AWT 910116 FB9784	S SB7BAEC16 0-0.5' AWT 910117 FB9849	S SB8AAEC16 0.5-1' 910117 FB9850	S SB8BAEC16 0-0.5' AWT 910117 FB9851	S SB9BAEC16 0-0.5' AWT 910117 FB9852
Nitrobenzene	520000 ug/kg	< 230	< 260	< 230	< 3100	< 290	< 330	< 250
N-Nitrosodimethylamine	ug/kg	< 1200	< 1400	< 1200	<16000	< 1500	< 1700	< 1300
N-Nitrosodi-n-propylamine	660 ug/kg	< 1200	< 1400	< 1200	<16000	< 1500	<34000	<1300
N-Nitrosodiphenylamine	600000 ug/kg	< 230	< 260	< 230	< 3100	< 290	< 330	< 250
Phenanthrene	ug/kg	< 650	763	< 650	< 8800	< 810	1240	< 710
Pyrene	10000 ug/kg	1670	4070	319	14400	1160	2400	< 250
1,2,4-Trichlorobenzene	1200000 ug/kg	< 230	< 260	< 230	< 3100	< 290	< 330	< 250
2-Chlorophenol	5200000 ug/kg	< 400	< 450	< 400	< 5400	< 500	< 570	< 430
2,4-Dichlorophenol	3100000 ug/kg	< 320	< 370	< 330	< 4400	< 410	< 460	< 360
2,4-Dimethylphenol	10000000 ug/kg	< 320	< 370	< 330	< 4400	< 410	< 460	< 360
4,6-Dinitro-o-cresol	ug/kg	< 2900	< 3300	< 2900	<39000	< 3600	< 4100	< 3200
2,4-Dinitrophenol	2100000 ug/kg	< 5000	< 5800	< 5100	<69000	< 6300	< 7200	< 5500
2-Nitrophenol	ug/kg	< 430	< 490	< 440	< 5900	< 540	< 620	< 470
4-Nitrophenol	ug/kg	< 290	< 330	< 290	< 3900	< 360	< 8200	< 320
p-Chloro-m-cresol	ug/kg	< 360	< 410	< 360	< 4900	< 450	< 510	< 390
Pentachlorophenol	24000 ug/kg	< 430	< 490	< 440	< 5900	< 540	< 620	< 470
Phenol	10000000 ug/kg	< 180	< 210	< 180	< 2400	< 230	< 260	< 200
2,4,6-Trichlorophenol	270000 ug/kg	< 320	< 370	< 330	< 4400	< 410	< 460	< 360
Aroclor 1016	2000 ug/kg	< 67	< 62	< 61	< 80	< 67	< 73	< 61
Aroclor 1221	2000 ug/kg	< 67	< 62	< 61	< 80	< 67	< 73	< 61
Aroclor 1232	2000 ug/kg	< 67	< 62	< 61	< 80	< 67	< 73	< 61
Aroclor 1242	2000 ug/kg	< 67	< 62	< 61	< 80	< 67	< 73	< 61
Aroclor 1248	2000 ug/kg	< 67	< 62	< 61	< 80	< 67	< 73	< 61
Aroclor 1254	2000 ug/kg	< 130	< 120	< 120	< 160	< 130	< 150	< 120
Aroclor 1260	2000 ug/kg	< 130	< 120	< 120	< 160	< 130	< 150	< 120

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

4.02.17 AEC #17 - Wastewater Treatment Plant

AEC #17 is the Wastewater Treatment plant located in the southeast corner of the property. This area borders on the Passaic River and eastern property line. The majority of the area is paved or gravel covered. AEC #17 is presented in Figure 4-17.

Phase I Sampling Program

A total of four soil samples were collected from areas of evident staining. Two soil samples were collected from the 6-12" interval below grade and two were collected from the 0-6" interval above the water table. The four samples were analyzed for PCB, Pesticides, PP Metals, VO+15, and BNA+25. The analytical results indicate the PCB and VO+15 constituents are below the NJDEPE's NRDC soil cleanup criteria. The Pesticides analytical results indicate the following constituent exceeded the NJDEPE's NRDC soil cleanup criteria:

- Toxaphene

The BNA+25 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria:

- Benzo(a)pyrene
- BIS
- N-Nitrosodi-n-propylamine

The PP Metals analytical results indicate the following constituent exceeds the NJDEPE's NRDC soil cleanup criteria:

- Arsenic

The Phase I analytical results for the samples collected in AEC #17 are presented in Table 4.02.17-1.

Phase II Sampling Program

One soil sample was collected from 0-6" below grade from an area of evident staining between the tanks. This sample was analyzed for TPH and BN+15. The analytical results indicate the following constituents to exist at concentrations exceeding the NJDEPE's NRDC soil cleanup criteria. TPH and BIS were found at 17,200 mg/kg and 5,720 mg/kg, respectively.

The Phase II analytical results for the sample collected in AEC #17 are presented in Table 4.02.17-2.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 17

Table 4.02.17-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC17-ADD1 0.5'-1' 910312 FC2017	S AEC17-ADD2 0.5'-1' 910312 FC2018	S AEC17ADD1B 0-0.5' AWT 910312 FC2020	S AEC17ADD2B 0-0.5' AWT 910312 FC2019
VOLATILE ORGANICS					
Acrolein	ug/kg	< 110	< 110	< 120	< 120
Acrylonitrile	5000 ug/kg	< 110	< 110	< 120	< 120
Benzene	13000 ug/kg	< 4.9	< 5.0	< 5.1	< 5.3
bis(Chloromethyl)ether	ug/kg	< 11	< 11	< 12	< 12
Bromoform	370000 ug/kg	< 5.2	< 5.3	< 5.5	< 5.7
Carbon tetrachloride	4000 ug/kg	< 3.1	< 3.2	< 3.3	< 3.4
Chlorobenzene	680000 ug/kg	< 6.7	< 6.8	< 7.0	< 7.2
Chlorodibromomethane	1000000 ug/kg	< 3.4	< 3.5	< 3.6	< 3.7
Chloroethane	ug/kg	< 11	< 11	< 12	< 12
2-Chloroethylvinyl ether	ug/kg	< 11	< 11	< 12	< 12
Chloroform	28000 ug/kg	< 1.8	< 1.8	< 1.9	< 1.9
Dichlorobromomethane	ug/kg	< 2.4	< 2.5	< 2.6	< 2.7
Dichlorodifluoromethane	ug/kg	< 11	< 11	< 12	< 12
1,1-Dichloroethane	1000000 ug/kg	< 5.2	< 5.3	< 5.5	< 5.7
1,2-Dichloroethane	24000 ug/kg	< 3.1	< 3.2	< 3.3	< 3.4
1,1-Dichloroethylene	150000 ug/kg	< 3.1	< 3.2	< 3.3	< 3.4
1,2-Dichloropropane	43000 ug/kg	< 6.7	< 6.8	< 7.0	< 7.2
cis-1,3-Dichloropropylene	5000 ug/kg	< 5.6	< 5.7	< 5.8	< 6.0
Ethylbenzene	1000000 ug/kg	< 8.0	< 8.2	< 8.4	< 8.7
Methyl bromide	ug/kg	< 11	< 11	< 12	< 12
Methyl chloride	ug/kg	< 11	< 11	< 12	< 12
Methylene chloride	210000 ug/kg	6.29	< 3.2	9.68	< 3.4
1,1,2,2-Tetrachloroethane	70000 ug/kg	< 7.7	< 7.8	< 8.0	< 8.3
Tetrachloroethylene	6000 ug/kg	< 4.6	< 4.6	< 4.8	< 4.9
Toluene	1000000 ug/kg	< 6.7	< 6.8	< 7.0	< 7.2
1,2-Trans-dichloroethylene	1000000 ug/kg	< 1.8	< 1.8	< 1.9	< 1.9
1,1,1-Trichloroethane	420000 ug/kg	< 4.2	< 4.3	< 4.4	< 4.6
1,1,2-Trichloroethane	420000 ug/kg	< 5.6	< 5.7	< 5.8	< 6.0
Trichloroethylene	54000 ug/kg	< 2.1	< 2.2	< 2.2	< 2.3
Trichlorofluoromethane	ug/kg	< 11	16.1	< 12	< 12
Vinyl chloride	7000 ug/kg	< 11	< 11	< 12	< 12
trans-1,3-Dichloropropylene	5000 ug/kg	< 11	< 11	< 12	< 12
SEMI-VOLATILE ORG.					
Acenaphthene	10000000 ug/kg	< 210	< 210	< 220	< 230
Acenaphthylene	ug/kg	< 380	< 390	< 400	< 420
Anthracene	10000000 ug/kg	< 210	< 210	< 220	< 230
Benzidine	ug/kg	< 4800	< 4900	< 5000	< 5300
Benzo(a)anthracene	4000 ug/kg	< 850	< 870	< 890	< 940
Benzo(a)pyrene	660 ug/kg	682	647	< 290	341
Benzo(b)fluoranthene	4000 ug/kg	< 520	1280	< 550	< 580
Benzo(ghi)perylene	ug/kg	< 450	839	< 470	< 500
Benzo(k)fluoranthene	4000 ug/kg	< 270	< 280	< 290	< 300
bis(2-Chloroethoxy)methane	ug/kg	< 580	< 590	< 600	< 640
bis(2-Chloroethyl) ether	3000 ug/kg	< 620	< 630	< 650	< 690
bis(2-Chloroisopropyl)ether	10000000 ug/kg	< 620	< 630	< 650	< 690
bis(2-Ethylhexyl)phthalate	210000 ug/kg	57400	3190000	< 1100	< 1200
4-Bromophenyl phenyl ether	ug/kg	< 210	< 210	< 220	< 230
Butyl benzyl phthalate	10000000 ug/kg	< 1100	< 1100	< 1100	< 1200
2-Chloronaphthalene	ug/kg	< 210	< 210	< 220	< 230
4-Chlorophenyl phenyl ether	ug/kg	< 460	< 470	< 480	< 510
Chrysene	40000 ug/kg	571	< 280	< 290	327
Dibenzo(a,h)anthracene	660 ug/kg	< 270	< 280	< 290	< 300
1,2-Dichlorobenzene	10000000 ug/kg	< 210	< 210	< 220	< 230

NOTE: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

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BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 17

Table 4.02.17-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC17-ADD1 0.5'-1' 910312 FC2017	S AEC17-ADD2 0.5'-1' 910312 FC2018	S AEC17ADD1B 0-0.5' AWT 910312 FC2020	S AEC17ADD2B 0-0.5' AWT 910312 FC2019
1,3-Dichlorobenzene	10000000 ug/kg	< 210	< 210	< 220	< 230
1,4-Dichlorobenzene	10000000 ug/kg	< 480	< 490	< 500	< 530
3,3'-Dichlorobenzidine	6000 ug/kg	< 1800	< 1840	< 1880	< 1990
Diethyl phthalate	10000000 ug/kg	< 1100	< 1100	< 1100	< 1200
Dimethyl phthalate	10000000 ug/kg	< 1100	< 1100	< 1100	< 1200
Di-n-butyl phthalate	10000000 ug/kg	4490	1350	< 1100	< 1200
2,4-Dinitrotoluene	ug/kg	< 620	< 630	< 650	< 690
2,6-Dinitrotoluene	ug/kg	< 210	< 210	< 220	< 230
Di-n-octyl phthalate	10000000 ug/kg	< 1100	< 1100	< 1100	< 1200
1,2-Diphenylhydrazine	ug/kg	< 1100	< 1100	< 1100	< 1200
Fluoranthene	10000 ug/kg	839	383	< 250	303
Fluorene	10000000 ug/kg	< 210	< 210	< 220	< 230
Hexachlorobenzene	2000 ug/kg	< 210	< 210	< 220	< 230
Hexachlorobutadiene	210000 ug/kg	< 98	< 100	< 100	< 110
Hexachlorocyclopentadiene	7300000 ug/kg	< 1100	< 1100	< 1100	< 1200
Hexachloroethane	100000 ug/kg	< 170	< 180	< 180	< 190
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	471	1030	< 420	< 450
Isophorone	10000000 ug/kg	< 240	< 240	< 250	< 270
Naphthalene	4200000 ug/kg	< 170	217	< 180	< 190
Nitrobenzene	520000 ug/kg	< 210	< 210	< 220	< 230
N-Nitrosodimethylamine	ug/kg	< 1100	< 1100	< 1100	< 1200
N-Nitrosodi-n-propylamine	660 ug/kg	< 1100	< 1100	< 1100	< 1200
N-Nitrosodiphenylamine	600000 ug/kg	< 210	< 210	< 220	< 230
Phenanthrene	ug/kg	< 590	< 600	< 620	< 650
Pyrene	10000 ug/kg	772	696	< 220	397
1,2,4-Trichlorobenzene	1200000 ug/kg	< 210	< 210	< 220	< 230
2-Chlorophenol	5200000 ug/kg	< 360	< 370	< 380	< 400
2,4-Dichlorophenol	3100000 ug/kg	< 290	< 300	< 310	< 330
2,4-Dimethylphenol	10000000 ug/kg	< 290	< 300	< 310	< 330
4,6-Dinitro-o-cresol	ug/kg	< 2600	< 2700	< 2700	< 2900
2,4-Dinitrophenol	2100000 ug/kg	< 4600	< 4700	< 4800	< 5100
2-Nitrophenol	ug/kg	< 390	< 400	< 410	< 430
4-Nitrophenol	ug/kg	< 260	< 270	< 270	< 290
p-Chloro-m-cresol	ug/kg	< 330	< 330	< 340	< 360
Pentachlorophenol	24000 ug/kg	< 390	< 400	< 410	< 430
Phenol	10000000 ug/kg	< 160	< 170	< 170	< 180
2,4,6-Trichlorophenol	270000 ug/kg	< 290	< 300	< 310	< 330
Aldrin	170 ug/kg	< 5.5	< 5.7	< 5.8	< 6.0
Alpha-BHC	ug/kg	< 5.5	< 5.7	< 5.8	< 6.0
Beta-BHC	ug/kg	< 5.5	< 5.7	< 5.8	< 6.0
Gamma-BHC	ug/kg	< 5.5	< 5.7	< 5.8	< 6.0
Delta-BHC	ug/kg	< 5.5	< 5.7	< 5.8	< 6.0
Chlordane	ug/kg	< 110	< 110	< 120	< 120
4,4'-DDT	9000 ug/kg	50.8	< 11	< 12	< 12
4,4'-DDE	9000 ug/kg	< 11	< 11	< 12	< 12
4,4'-DDD	12000 ug/kg	< 11	< 11	< 12	< 12
Dieldrin	180 ug/kg	< 11	< 11	< 12	< 12
Endosulfan I	52000 ug/kg	< 5.5	< 5.7	< 5.8	< 6.0
Endosulfan II	ug/kg	< 11	< 11	< 12	< 12
Endosulfan sulfate	ug/kg	< 11	< 11	< 12	< 12
Endrin	310000 ug/kg	< 11	< 11	< 12	< 12
Endrin aldehyde	ug/kg	< 11	< 11	< 12	< 12
Heptachlor	650 ug/kg	< 5.5	< 5.7	< 5.8	< 6.0
Heptachlor epoxide	ug/kg	< 5.5	< 5.7	< 5.8	< 6.0

NOTE: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

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*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 17*

Table 4.02.17-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC17-ADD1 0.5-1' 910312 FC2017	S AEC17-ADD2 0.5-1' 910312 FC2018	S AEC17ADD1B 0-0.5' AWT 910312 FC2020	S AEC17ADD2B 0-0.5' AWT 910312 FC2019
Toxaphene	200 ug/kg	< 220	< 230	< 230	< 240
Aroclor 1016	2000 ug/kg	< 55	< 57	< 58	< 60
Aroclor 1221	2000 ug/kg	< 55	< 57	< 58	< 60
Aroclor 1232	2000 ug/kg	< 55	< 57	< 58	< 60
Aroclor 1242	2000 ug/kg	< 55	< 57	< 58	< 60
Aroclor 1248	2000 ug/kg	< 55	< 57	< 58	< 60
Aroclor 1254	2000 ug/kg	< 110	< 110	< 120	< 120
Aroclor 1260	2000 ug/kg	137	< 110	< 120	< 120
INORGANICS					
Antimony	340000 ug/kg	< 6700	< 6800	< 6600	< 6800
Arsenic	2000 ug/kg	2500	3000	< 1100	1300
Beryllium	1000 ug/kg	230	< 110	< 110	< 110
Cadmium	100000 ug/kg	360	500	< 220	< 230
Chromium	ug/kg	47000	43000	7100	9100
Copper	600000 ug/kg	87000	72000	9500	13000
Lead	600000 ug/kg	64000	48000	7700	6200
Mercury	270000 ug/kg	280	130	210	120
Nickel	2400000 ug/kg	33000	23000	5700	5200
Selenium	3100000 ug/kg	< 560	< 570	< 550	< 570
Silver	4100000 ug/kg	< 1100	< 1100	< 1100	< 1100
Thallium	2000 ug/kg	< 1100	< 1100	< 1100	< 1100
Zinc	1500000 ug/kg	150000	110000	26000	22000

NOTE: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

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Table 4.02.17-2

PLE ID - FH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	WW-1			
		QA	Result	Units	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)		17200	mg/kg	17.9
VOLATILE ORGANICS					
Methyl chloride					
Methyl bromide					
Dichlorodifluoromethane					
Vinyl chloride	7000				
Chloroethane					
Methylene chloride	210000				
Acrolein					
Acrylonitrile	5000				
Trichlorofluoromethane					
1,1-Dichloroethylene	150000				
1,1-Dichloroethane	1000000				
1,2-Trans-dichloroethylene	1000000				
Chloroform	28000				
1,2-Dichloroethane	24000				
1,1,1-Trichloroethane	420000				
Carbon tetrachloride	4000				
Dichlorobromomethane					
1,2-Dichloropropane	43000				
cis-1,3-Dichloropropylene	5000				
Trichloroethylene	54000				
Chlorodibromomethane	1000000				
(bromomethyl)ether					
Benzene	13000				
1,1,2-Trichloroethane	420000				
trans-1,3-Dichloropropylene	5000				
2-Chloroethylvinyl ether					
Bromoform	370000				
1,1,2,2-Tetrachloroethane	70000				
Tetrachloroethylene	6000				
Toluene	1000000				
Chlorobenzene	680000				
Ethylbenzene	1000000				
SEMI-VOLATILE ORG.					
N-Nitrosodimethylamine		ND	0 ug/kg	15000	
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	8600	
1,3-Dichlorobenzene	1000000	ND	0 ug/kg	2900	
1,4-Dichlorobenzene	1000000	ND	0 ug/kg	6700	
1,2-Dichlorobenzene	1000000	ND	0 ug/kg	2900	
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	15000	
Hexachloroethane	100000	ND	0 ug/kg	2400	
bis(2-Chloroisopropyl)ether	1000000	ND	0 ug/kg	8600	
Nitrobenzene	520000	ND	0 ug/kg	2900	
Isophorone	1000000	ND	0 ug/kg	3300	
bis(2-Chloroethoxy)methane		ND	0 ug/kg	8000	
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	2900	
Naphthalene	4200000	ND	0 ug/kg	2400	
Hexachlorobutadiene	210000	ND	0 ug/kg	1400	
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	15000	
2-Chloronaphthalene		ND	0 ug/kg	2900	
butyl phthalate	10000000	ND	0 ug/kg	7600	
Acenaphthylene		ND	0 ug/kg	5300	
2,6-Dinitrotoluene		ND	0 ug/kg	2900	

Parameters Not Analyzed

843890162

Table 4.02.17-2

PLE ID -- TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	WW-1 0-.5' DAV816 930701			
		QA	Result	Units	MDL
Acenaphthene	10000000	ND	0	ug/kg	2900
2,4-Dinitrotoluene		ND	0	ug/kg	8600
Diethyl phthalate	10000000	ND	0	ug/kg	15000
Fluorene	10000000	ND	0	ug/kg	2900
4-Chlorophenyl phenyl ether		ND	0	ug/kg	6400
1,2-Diphenylhydrazine		ND	0	ug/kg	15000
N-Nitrosodiphenylamine	600000	ND	0	ug/kg	2900
4-Bromophenyl phenyl ether		ND	0	ug/kg	2900
Hexachlorobenzene	2000	ND	0	ug/kg	2900
Phenanthrene		ND	0	ug/kg	8200
Anthracene	10000000	ND	0	ug/kg	2900
Di-n-butyl phthalate	10000000	BMDL	764	ug/kg	15000
Fluoranthene	10000	ND	0	ug/kg	3300
Pyrene	10000	ND	0	ug/kg	2900
Benzidine		ND	0	ug/kg	67000
Butyl benzyl phthalate	10000000	ND	0	ug/kg	15000
Benzo(a)anthracene	4000	ND	0	ug/kg	12000
Chrysene	40000	ND	0	ug/kg	3800
3,3'-Dichlorobenzidine	6000	ND	0	ug/kg	25000
bis(2-Ethylhexyl)phthalate	210000	5720000	ug/kg		15000
Di-n-octyl phthalate	10000000	ND	0	ug/kg	15000
Benzo(b)fluoranthene	4000	ND	0	ug/kg	7300
Benzo(k)fluoranthene	4000	ND	0	ug/kg	3800
>(a)pyrene	660	ND	0	ug/kg	3800
muco(1,2,3-c,d)pyrene	4000	ND	0	ug/kg	7100
Dibenzo(a,h)anthracene	660	ND	0	ug/kg	3800
Benzo(ghi)perylene		ND	0	ug/kg	6200
Phenol	10000000				
2-Chlorophenol	5200000				
2-Nitrophenol					
2,4-Dimethylphenol	10000000				
2,4-Dichlorophenol	3100000				
p-Chloro-m-cresol					
2,4,6-Trichlorophenol	270000				
2,4-Dinitrophenol	2100000				
4-Nitrophenol					
4,6-Dinitro-o-cresol					
Pentachlorophenol	24000				
Aroclor 1016	2000				
Aroclor 1221	2000				
Aroclor 1242	2000				
Aroclor 1248	2000				
Aroclor 1254	2000				
Aroclor 1260	2000				
Aroclor 1232	2000				
INORGANICS					
Antimony	340000				
Arsenic	2000				
Beryllium	1000				
Cadmium	100000				
Chromium					
Lead	600000				
Mercury	270000				

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Table 4.02.17-2

LE ID H LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	WW-1 0-.5' DAV816 930701	QA	Result	Units	MDL
Nickel	2400000					
Selenium	3100000					
Silver	4100000					
Thallium	2000	Parameters Not Analyzed				
Zinc	1500000					

843890164

4.02.18 AEC #18 - Former Pilot Plant and Old Tank Farm

AEC #18 is a former Pilot Plant and Old Tank Farm which is located south of the large warehouse and borders on the east property line. The tank farm was formerly used for the Pilot Plant and was also used to store inorganics from the wastewater treatment plant. This area is also served by a trench drain which has collapsed. AEC #18 is presented as Figure 4-18.

Phase I Sampling Program

One soil sample was collected in AEC #18 from the immediate location of the collapsed trench and analyzed for TPH, BN+15, and PP Metals. The analytical results indicate TPH is below the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The BN+15 and PP Metals analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria, respectively:

- N-Nitrosodi-n-propylamine
- Arsenic

The Phase I analytical results for the sample collected in AEC #18 are presented in Table 4.02.18-1.

Phase II Sampling Program

No soil sampling was conducted in this AEC during the Phase II Sampling Program. Based upon the analytical results a "No Further Action" status is requested for this AEC.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 18

Table 4.02.18-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC18-ADD1 0-0.5' 910311 FC1945
Petroleum Hydrocarbons (IR)	10000 mg/kg	301
SEMI-VOLATILE ORG.		
Acenaphthene	10000000 ug/kg	< 210
Acenaphthylene	ug/kg	< 380
Anthracene	10000000 ug/kg	< 210
Benzidine	ug/kg	< 4800
Benzo(a)anthracene	4000 ug/kg	< 840
Benzo(a)pyrene	660 ug/kg	< 270
Benzo(b)fluoranthene	4000 ug/kg	< 520
Benzo(ghi)perylene	ug/kg	< 440
Benzo(k)fluoranthene	4000 ug/kg	< 270
bis(2-Chloroethoxy)methane	ug/kg	< 570
bis(2-Chloroethyl) ether	3000 ug/kg	< 620
bis(2-Chloroisopropyl)ether	10000000 ug/kg	< 620
bis(2-Ethylhexyl)phthalate	210000 ug/kg	5640
4-Bromophenyl phenyl ether	ug/kg	< 210
Butyl benzyl phthalate	10000000 ug/kg	< 1100
2-Chloronaphthalene	ug/kg	< 210
4-Chlorophenyl phenyl ether	ug/kg	< 450
Chrysene	40000 ug/kg	< 270
Dibenzo(a,h)anthracene	660 ug/kg	< 270
1,2-Dichlorobenzene	10000000 ug/kg	< 210
1,3-Dichlorobenzene	10000000 ug/kg	< 210
1,4-Dichlorobenzene	10000000 ug/kg	< 480
3,3'-Dichlorobenzidine	6000 ug/kg	< 1780
Diethyl phthalate	10000000 ug/kg	< 1100
Dimethyl phthalate	10000000 ug/kg	< 1100
Di-n-butyl phthalate	10000000 ug/kg	4810
2,4-Dinitrotoluene	ug/kg	< 620
2,6-Dinitrotoluene	ug/kg	< 210
Di-n-octyl phthalate	10000000 ug/kg	< 1100
1,2-Diphenylhydrazine	ug/kg	< 1100
Fluoranthene	10000 ug/kg	< 240
Fluorene	10000000 ug/kg	< 210
Hexachlorobenzene	2000 ug/kg	< 210
Hexachlorobutadiene	210000 ug/kg	< 97
Hexachlorocyclopentadiene	7300000 ug/kg	< 1100
Hexachloroethane	100000 ug/kg	< 170
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 400
Isophorone	10000000 ug/kg	< 240
Naphthalene	4200000 ug/kg	< 170
Nitrobenzene	520000 ug/kg	< 210
N-Nitrosodimethylamine	ug/kg	< 1100
N-Nitrosodi-n-propylamine	660 ug/kg	< 1100
N-Nitrosodiphenylamine	600000 ug/kg	< 210
Phenanthrene	ug/kg	< 580
Pyrene	10000 ug/kg	< 210
1,2,4-Trichlorobenzene	1200000 ug/kg	< 210
INORGANICS		
Antimony	340000 ug/kg	< 6600
Arsenic	2000 ug/kg	<11000
Beryllium	1000 ug/kg	340
Cadmium	100000 ug/kg	< 220
Chromium	ug/kg	14000

NOTE: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

843890166

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 18*

Table 4.02.18-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC18-ADD1 0-0.5' 910311 FC1945
Copper	600000 ug/kg	16000
Lead	600000 ug/kg	34000
Mercury	270000 ug/kg	< 89
Nickel	2400000 ug/kg	6600
Selenium	3100000 ug/kg	< 25
Silver	4100000 ug/kg	< 1100
Thallium	2000 ug/kg	< 1100
Vanadium	7100000 ug/kg	17000
Zinc	1500000 ug/kg	21000

NOTE: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

843890167

4.02.19 AEC #19 - Former Dyestuff Plant and PAA Flaker

AEC #19 is located at the former Dyestuff plant which ceased operation in 1964. This area was used to flake PAA already used to identify a building prior to shipment. A transformer pad is located on the south side of the structure. AEC #19 is presented as Figure 4-19.

Phase I Sampling Program

One chip sample and one surface soil sample was collected in this area. The surface soil sample was collected from the concrete pad's apparent drainage point. Samples were analyzed for PCB only. The PCB analytical results are below the NJDEPE's NRDC soil cleanup criteria.

Phase I analytical results for AEC #19 are presented in Table 4.02.19-1.

Phase II Sampling Program

No soil samples were collected from this AEC. AEC #19 is not considered a RCRA unit but is considered an AEC under ECRA Case #90537. The PCB analytical results from the Phase I sampling are below the NJDEPE's NRDC soil cleanup criteria.

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 19*

Table 4.02.19-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC19-ADD1 0-0.5' 910311 FC1943	X AEC19CH1 Chip 910122 FB9989
SEMI-VOLATILE ORG.			
Aroclor 1016	2000 ug/kg	< 60	< 55
Aroclor 1221	2000 ug/kg	< 60	< 55
Aroclor 1232	2000 ug/kg	< 60	< 55
Aroclor 1242	2000 ug/kg	< 60	< 55
Aroclor 1248	2000 ug/kg	< 60	< 55
Aroclor 1254	2000 ug/kg	< 120	< 110
Aroclor 1260	2000 ug/kg	205	425

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

843890169

4.02.20 AEC #20 - Process Warehouse

AEC #20 is the Process Warehouse which is located adjacent to the east property line. The warehouse was used to store products prior to shipment. Sampling was not conducted in this area since this area will be addressed subsequent to the implementation of the decommissioning plan. AEC #20 is presented as Figure 4-20.

Phase II Sampling Program

No samples were taken at this time pending completion of site dismantling activities by Taiwan Oil. Upon completion, a visual inspection and photo documentation of AEC #20 will be performed to determine any integrity breaches in the pavement or concrete. If integrity breaches are found samples will be taken in accordance with the conditions outlined in the NJDEPE's April 21, 1993 Conditional Approval letter.

4.02.21 AEC #21 - Railroad Spur

The four railroad spurs located within the facility are being considered AEC #21. These areas have been used for loading and unloading railcars for material transport. Soils have been previously removed from these areas and properly disposed. AEC #21 is presented as Figure 4-21.

Phase I Sampling Program

A total of fifteen samples were collected at AEC #21 from the 0-6" interval below ballast. These samples were collected in accordance with the approved Phase I Sampling Plan and Addendum with one sample being collected from the beginning and end of each spur and the remaining sample locations evenly spaced along the spurs. The fifteen samples were analyzed for TPH, BN+15, and PP Metals. The TPH analytical results are below the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The BN+15 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria:

- Benzo(a)pyrene
- BIS
- N-Nitrosodi-n-propylamine

The PP Metals analytical results indicate the following constituent exceeds the NJDEPE's NRDC soil cleanup criteria:

- Arsenic

Phase I analytical results for AEC #21 are presented in Table 4.02.21-1.

Phase II Sampling Program

A total of eight soil samples from four sample locations were collected to delineate sample AEC21-ADD1E taken during the Phase I sampling program. Four samples were collected from the 0-6" interval below grade with the four remaining samples collected from the 0-6" interval above the water table. The eight soil samples collected were analyzed for TPH, BN+15 and PP Metals. The TPH analytical results are below the NJDEPE's NRDC soil cleanup criteria of 10,000 mg/kg. The BN+15 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria at the following concentrations:

Benzo(k)flouranthene	4.75 mg/kg
Benzo(b)flouranthene	9.01 mg/kg
Benzo(a)pyrene	5.14 mg/kg
Benzo(a)anthracene	6.43 mg/kg
Dibenzo(a,h)anthracene	.907 mg/kg
Flouranthene	17.7 mg/kg
Pyrene	15.9 mg/kg

The PP Metals analytical results indicate the following constituents to exist at concentrations exceeding the NJDEPE's NRDC soil cleanup criteria:

Antimony	3,380 mg/kg
Arsenic	1,810 mg/kg
Copper	6,100 mg/kg
Lead	40,000 mg/kg
Zinc	1,790 mg/kg

843890172

The Phase II analytical results for AEC #21 are presented in Table 4.02.21-2

SAMPLE ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC21RR1A 0-0.5' 910311 FC1936	S AEC21RR1B 0-0.5' 910311 FC1937	S AEC21RR1C 0-0.5' 910311 FC1946	S AEC21RR1D 0-0.5' 910312 FC2027	S AEC21RR1E 0-0.5' 910312 FC2028	S AEC21RR2A 0-0.5' 910311 FC1938	S AEC21RR2B 0-0.5' 910311 FC1947	S AEC21RR2C 0-0.5' 910311 FC1939
Petroleum Hydrocarbons (IR)	10000 mg/kg	98.5	4850	193	2110	62.7	1530	713	79.7
SEMI-VOLATILE ORG.									
Acenaphthene	10000000 ug/kg		1630	686	1610	<	220	210	463
Acenaphthylene	ug/kg	<	380	<	360	<	480	<	410
Anthracene	10000000 ug/kg		837	<	190	<	260	<	210
Benzidine	ug/kg	<	4800	<	4500	<	6100	<	5100
Benzo(a)anthracene	4000 ug/kg	<	860	<	790	<	1100	<	910
Benzo(a)pyrene	660 ug/kg	<	270	<	250	<	350	<	290
Benzo(b)fluoranthene	4000 ug/kg		584	<	490	<	660	<	560
Benzo(ghi)perylene	ug/kg	<	450	<	420	<	570	<	480
Benzo(k)fluoranthene	4000 ug/kg	<	270	<	250	<	350	<	290
bis(2-Chloroethoxy)methane	ug/kg	<	580	<	540	<	730	<	620
bis(2-Chloroethyl) ether	3000 ug/kg	<	620	<	580	<	790	<	660
bis(2-Chloroisopropyl)ether	10000000 ug/kg	<	620	<	580	<	790	<	660
bis(2-Ethylhexyl)phthalate	210000 ug/kg		453000	932000	303000	<	2600000	<	1100
4-Bromophenyl phenyl ether	ug/kg	<	210	<	190	<	260	<	220
Butyl benzyl phthalate	10000000 ug/kg	<	1100	<	1000	<	1400	<	1200
2-Chloronaphthalene	ug/kg	<	210	<	190	<	260	<	220
4-Chlorophenyl phenyl ether	ug/kg	<	460	<	430	<	580	<	490
Chrysene	40000 ug/kg		679	<	250	<	350	<	290
Dibenzo(a,h)anthracene	660 ug/kg	<	270	<	250	<	350	<	290
1,2-Dichlorobenzene	10000000 ug/kg	<	210	<	190	<	260	<	220
1,3-Dichlorobenzene	10000000 ug/kg	<	210	<	190	<	260	<	220
1,4-Dichlorobenzene	10000000 ug/kg	<	480	<	450	<	610	<	510
3,3'-Dichlorobenzidine	6000 ug/kg	<	1810	<	1680	<	2280	<	1920
Diethyl phthalate	10000000 ug/kg	<	1100	<	1000	<	1400	<	1200
Dimethyl phthalate	10000000 ug/kg	<	1100	<	1000	<	1400	<	1200
Di-n-butyl phthalate	10000000 ug/kg	<	1100	<	4300	<	6700	<	1200
2,4-Dinitrotoluene	ug/kg	<	620	<	580	<	790	<	660
2,6-Dinitrotoluene	ug/kg	<	210	<	190	<	260	<	220
Di-n-octyl phthalate	10000000 ug/kg	<	1100	<	4900	<	1400	<	1200
1,2-Diphenylhydrazine	ug/kg	<	1100	<	1000	<	1400	<	1200
Fluoranthene	10000 ug/kg		2700	819	457	<	679	<	240
Fluorene	10000000 ug/kg		1200	421	1060	<	220	<	210
Hexachlorobenzene	2000 ug/kg	<	210	<	190	<	260	<	220
Hexachlorobutadiene	210000 ug/kg	<	99	<	92	<	120	<	100
Hexachlorocyclopentadiene	7300000 ug/kg	<	1100	<	1000	<	1400	<	1100

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
 The "-" symbol indicates that analysis was not performed for a given analyte.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 21

Table 4.02.21-1

SAMPLE ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC21RR1A 0-0.5' 910311 FC1936	S AEC21RR1B 0-0.5' 910311 FC1937	S AEC21RR1C 0-0.5' 910311 FC1946	S AEC21RR1D 0-0.5' 910312 FC2027	S AEC21RR1E 0-0.5' 910312 FC2028	S AEC21RR2A 0-0.5' 910311 FC1938	S AEC21RR2B 0-0.5' 910311 FC1947	S AEC21RR2C 0-0.5' 910311 FC1939
Hexachloroethane	100000 ug/kg	< 180	< 160	< 220	< 190	< 170	< 190	< 190	< 210
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 410	< 380	< 510	< 430	< 400	< 440	< 430	< 490
Isophorone	1000000 ug/kg	< 240	< 220	< 300	< 260	< 240	< 260	< 250	< 290
Naphthalene	4200000 ug/kg	1610	2840	572	190	170	313	< 190	229
Nitrobenzene	520000 ug/kg	< 210	< 190	< 260	< 220	< 210	< 220	< 220	< 250
N-Nitrosodimethylamine	ug/kg	< 1100	< 1000	< 1400	< 1200	< 1100	< 1200	< 1200	< 1300
N-Nitrosodi-n-propylamine	660 ug/kg	< 1100	< 1000	< 1400	< 1200	< 1100	< 1200	< 1200	< 1300
N-Nitrosodiphenylamine	600000 ug/kg	< 210	< 190	< 260	< 220	< 210	< 220	< 220	< 250
Phenanthrene	ug/kg	7790	1390	1980	< 630	580	2580	27300	765
Pyrene	10000 ug/kg	4090	649	424	547	< 210	1930	11900	< 250
1,2,4-Trichlorobenzene	1200000 ug/kg	< 210	< 190	< 260	< 220	< 210	< 220	< 220	< 250
INORGANICS									
Arsenic	2000 ug/kg	-	-	< 1100	< 1100	1610000	-	2300	-
Beryllium	1000 ug/kg	-	-	< 110	< 110	< 150	-	210	-
Cadmium	100000 ug/kg	-	-	< 220	< 220	2600	-	< 270	-
Vanadium	7100000 ug/kg	-	-	7700	7600	16000	-	17000	-
Zinc	1500000 ug/kg	-	-	27000	21000	89000	-	48000	-

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
 The "-" symbol indicates that analysis was not performed for a given analyte.

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SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC21RR3A 0-0.5' 910311 FC1940	S AEC21RR3B 0-0.5' 910312 FC2025	S AEC21RR3C 0-0.5' 910312 FC2026	S AEC21RR4A 0-0.5' 910312 FC2029	S AEC21RR4B 0-0.5' 910312 FC2030	S AEC21RR4C 0-0.5' 910312 FC2031	S AEC21RR4D 0-0.5' 910312 FC2032
Petroleum Hydrocarbons (IR)	10000 mg/kg	98.5	195	27.6	8110	134	323	1150
SEMI-VOLATILE ORG.								
Acenaphthene	1000000 ug/kg	< 240	443	< 230	< 220	< 230	599	< 230
Acenaphthylene	ug/kg	< 440	< 430	< 420	< 410	< 420	< 470	< 430
Anthracene	1000000 ug/kg	< 240	294	< 230	< 220	< 230	1280	< 230
Benzidine	ug/kg	< 5600	< 5400	< 5300	< 5100	< 5200	< 5900	< 5400
Benzo(a)anthracene	4000 ug/kg	< 990	< 950	< 950	< 910	< 930	2520	< 960
Benzo(a)pyrene	660 ug/kg	< 320	540	< 300	< 290	< 300	2990	563
Benzo(b)fluoranthene	4000 ug/kg	< 610	1020	< 580	< 560	< 570	3490	708
Benzo(ghi)perylene	ug/kg	< 520	< 500	< 500	< 480	< 490	814	< 500
Benzo(k)fluoranthene	4000 ug/kg	< 320	< 310	< 300	< 290	< 300	< 330	< 310
bis(2-Chloroethoxy)methane	ug/kg	< 670	< 650	< 640	< 620	< 630	< 710	< 650
bis(2-Chloroethyl) ether	3000 ug/kg	< 720	< 700	< 690	< 660	< 680	< 760	< 700
bis(2-Chloroisopropyl)ether	1000000 ug/kg	< 720	< 700	< 690	< 660	< 680	< 760	< 700
bis(2-Ethylhexyl)phthalate	210000 ug/kg	22400	367000	< 14700	< 1200	< 1410	1410	< 1200
4-Bromophenyl phenyl ether	ug/kg	< 240	< 230	< 230	< 220	< 230	< 250	< 230
Butyl benzyl phthalate	1000000 ug/kg	< 1300	< 1200	< 1200	< 1200	< 1200	< 1300	< 1200
2-Chloronaphthalene	ug/kg	< 240	< 230	< 230	< 220	< 230	< 250	< 230
4-Chlorophenyl phenyl ether	ug/kg	< 530	< 510	< 510	< 490	< 500	< 560	< 510
Chrysene	40000 ug/kg	357	701	< 300	< 312	< 300	2980	870
Dibenzo(a,h)anthracene	660 ug/kg	< 320	< 310	< 300	< 290	< 300	< 330	< 310
1,2-Dichlorobenzene	1000000 ug/kg	< 240	< 230	< 230	< 220	< 230	< 250	< 230
1,3-Dichlorobenzene	1000000 ug/kg	< 240	< 230	< 230	< 220	< 230	< 250	< 230
1,4-Dichlorobenzene	1000000 ug/kg	< 560	< 540	< 530	< 510	< 520	< 590	< 540
3,3'-Dichlorobenzidine	6000 ug/kg	< 2090	< 2020	< 2000	< 1920	< 1960	2220	< 2020
Diethyl phthalate	1000000 ug/kg	< 1300	< 1200	< 1200	< 1200	< 1200	< 1300	< 1200
Dimethyl phthalate	1000000 ug/kg	< 1300	< 1200	< 1200	< 1200	< 1200	< 1300	< 1200
Di-n-butyl phthalate	1000000 ug/kg	1720	< 1200	< 1200	< 1200	< 1200	< 1300	< 1200
2,4-Dinitrotoluene	ug/kg	< 720	< 700	< 690	< 660	< 680	< 760	< 700
2,6-Dinitrotoluene	ug/kg	< 240	< 230	< 230	< 220	< 230	< 250	< 230
Di-n-octyl phthalate	1000000 ug/kg	< 1300	< 1200	< 1200	< 1200	< 1200	< 1300	< 1200
1,2-Diphenylhydrazine	ug/kg	< 1300	< 1200	< 1200	< 1200	< 1200	< 1300	< 1200
Fluoranthene	10000 ug/kg	463	1020	< 270	< 273	< 260	2750	824
Fluorene	1000000 ug/kg	< 240	344	< 230	< 2030	< 230	748	< 230
Hexachlorobenzene	2000 ug/kg	< 240	< 230	< 230	< 220	< 230	< 250	< 230
Hexachlorobutadiene	210000 ug/kg	< 110	< 110	< 110	< 100	< 110	< 120	< 110
Hexachlorocyclopentadiene	7300000 ug/kg	< 1300	< 1200	< 1200	< 1200	< 1200	< 1300	< 1200

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 21

Table 4.02.21-1

SAMPLE ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC21RR3A 0-0.5' 910311 FC1940	S AEC21RR3B 0-0.5' 910312 FC2025	S AEC21RR3C 0-0.5' 910312 FC2026	S AEC21RR4A 0-0.5' 910312 FC2029	S AEC21RR4B 0-0.5' 910312 FC2030	S AEC21RR4C 0-0.5' 910312 FC2031	S AEC21RR4D 0-0.5' 910312 FC2032
Hexachloroethane	100000 ug/kg	< 200	< 200	< 190	< 190	< 190	< 210	< 200
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 470	< 450	< 450	< 430	< 440	1600	< 450
Isophorone	1000000 ug/kg	< 280	< 270	< 270	< 260	< 260	< 290	< 270
Naphthalene	4200000 ug/kg	< 200	< 274	< 190	< 190	< 190	887	< 200
Nitrobenzene	520000 ug/kg	< 240	< 230	< 230	< 220	< 230	< 250	< 230
N-Nitrosodimethylamine	ug/kg	< 1300	< 1200	< 1200	< 1200	< 1200	< 1300	< 1200
N-Nitrosodi-n-propylamine	660 ug/kg	< 1300	< 1200	< 1200	< 1200	< 1200	< 1300	< 1200
N-Nitrosodiphenylamine	600000 ug/kg	< 240	< 230	< 230	< 220	< 230	< 250	< 230
Phenanthrene	ug/kg	< 680	1650	< 660	1110	< 640	5730	< 660
Pyrene	10000 ug/kg	399	884	< 230	1220	< 230	3170	1150
1,2,4-Trichlorobenzene	1200000 ug/kg	< 240	< 230	< 230	< 220	< 230	< 250	< 230
INORGANICS								
Arsenic	2000 ug/kg	-	2300	1500	2300	2100	27000	8500
Beryllium	1000 ug/kg	-	< 120	< 120	< 110	< 130	270	280
Cadmium	100000 ug/kg	-	< 250	< 250	< 230	< 250	1600	830
Vanadium	7100000 ug/kg	-	5000	7500	9600	7200	16000	21000
Zinc	1500000 ug/kg	-	45000	180000	22000	55000	541000	150000

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
 The "-" symbol indicates that analysis was not performed for a given analyte.

SAMPLING POINT ID	NJDEPE	AEC21-1A				AEC21-1B				AEC21-2A			
		0-0.5'	DAV810	930630		3.5-4'	DAV811	930630		0-0.5'	DAV807	930630	
LAB ID	Non-Residential Direct Contact Soil Criteria (ug/kg)				QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA
DATE													
Petroleum Hydrocarbons (IR)	10000 (mg/kg)		188 mg/kg	20.3		224 mg/kg	20.3			1460 mg/kg	18.3		
VOLATILE ORGANICS													
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
Chlorodibromomethane	1000000												
(bromomethyl)ether													
Benzene	13000												
1,1,2-Trichloroethane	420000												
trans-1,3-Dichloropropylene	5000												
2-Chloroethylvinyl ether													
Bromoform	370000												
1,1,2,2-Tetrachloroethane	70000												
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine		ND	0 ug/kg	820	ND	0 ug/kg	800	ND	0 ug/kg	760			
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	470	ND	0 ug/kg	460	ND	0 ug/kg	430			
1,3-Dichlorobenzene	1000000	ND	0 ug/kg	160	ND	0 ug/kg	150	ND	0 ug/kg	140			
1,4-Dichlorobenzene	1000000	ND	0 ug/kg	360	ND	0 ug/kg	350	ND	0 ug/kg	330			
1,2-Dichlorobenzene	1000000	ND	0 ug/kg	160	ND	0 ug/kg	150	ND	0 ug/kg	140			
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	820	ND	0 ug/kg	800	ND	0 ug/kg	760			
Hexachloroethane	100000	ND	0 ug/kg	130	ND	0 ug/kg	130	ND	0 ug/kg	120			
bis(2-Chloroisopropyl)ether	1000000	ND	0 ug/kg	470	ND	0 ug/kg	460	ND	0 ug/kg	430			
Nitrobenzene	520000	ND	0 ug/kg	160	ND	0 ug/kg	150	ND	0 ug/kg	140			
Isophorone	1000000	ND	0 ug/kg	180	ND	0 ug/kg	180	ND	0 ug/kg	170			
bis(2-Chloroethoxy)methane		ND	0 ug/kg	440	ND	0 ug/kg	420	ND	0 ug/kg	400			
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	160	ND	0 ug/kg	150	ND	0 ug/kg	140			
Naphthalene	4200000	2840 ug/kg	130			156 ug/kg	130			515 ug/kg	120		
Hexachlorobutadiene	210000	ND	0 ug/kg	74	ND	0 ug/kg	72	ND	0 ug/kg	68			
Hexachlorocyclopentadiene	730000	ND	0 ug/kg	820	ND	0 ug/kg	800	ND	0 ug/kg	760			
-bromonaphthalene		ND	0 ug/kg	160	ND	0 ug/kg	150	ND	0 ug/kg	140			
-aryl phthalate	1000000	ND	0 ug/kg	410	ND	0 ug/kg	400	ND	0 ug/kg	380			
Acenaphthylene		BMDL	58.8 ug/kg	290	ND	0 ug/kg	280	ND	0 ug/kg	260			
2,6-Dinitrotoluene		ND	0 ug/kg	160	ND	0 ug/kg	150	ND	0 ug/kg	140			

PLE ID DcrTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC21-1A			AEC21-1B			AEC21-2A				
		0-0.5'			3.5-4'			0-0.5'				
		DAV810 930630			DAV811 930630			DAV807 930630				
		QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA		
Acenaphthene	10000000		360 ug/kg	160	ND		0 ug/kg	150	ND		0 ug/kg	140
2,4-Dinitrotoluene		ND	0 ug/kg	470	ND		0 ug/kg	460	ND		0 ug/kg	430
Diethyl phthalate	10000000	ND	0 ug/kg	820	ND		0 ug/kg	800	ND		0 ug/kg	760
Fluorene	10000000		365 ug/kg	160	ND		0 ug/kg	150	ND		0 ug/kg	140
4-Chlorophenyl phenyl ether		ND	0 ug/kg	350	ND		0 ug/kg	340	ND		0 ug/kg	320
1,2-Diphenylhydrazine		ND	0 ug/kg	820	ND		0 ug/kg	800	ND		0 ug/kg	760
N-Nitrosodiphenylamine	600000	ND	0 ug/kg	160	ND		0 ug/kg	150	ND		0 ug/kg	140
4-Bromophenyl phenyl ether		ND	0 ug/kg	160	ND		0 ug/kg	150	ND		0 ug/kg	140
Hexachlorobenzene	2000	ND	0 ug/kg	160	ND		0 ug/kg	150	ND		0 ug/kg	140
Phenanthrene			5450 ug/kg	440	BMDL		378 ug/kg	430			711 ug/kg	410
Anthracene	10000000		992 ug/kg	160	ND		0 ug/kg	150	ND		0 ug/kg	140
Di-n-butyl phthalate	10000000	BMDL	616 ug/kg	820	BMDL		272 ug/kg	800	BMDL		379 ug/kg	760
Fluoranthene	10000		8200 ug/kg	180	BMDL		175 ug/kg	180			957 ug/kg	170
Pyrene	10000		7550 ug/kg	160			158 ug/kg	150			989 ug/kg	140
Benzidine		ND	0 ug/kg	3600	ND		0 ug/kg	3500	ND		0 ug/kg	3300
Butyl benzyl phthalate	10000000	ND	0 ug/kg	820	ND		0 ug/kg	800	ND		0 ug/kg	760
Benzo(a)anthracene	4000		3560 ug/kg	640	ND		0 ug/kg	630	BMDL		404 ug/kg	590
Chrysene	40000		4060 ug/kg	210	BMDL		168 ug/kg	200			582 ug/kg	190
3,3'-Dichlorobenzidine	6000	ND	0 ug/kg	1360	ND		0 ug/kg	1320	ND		0 ug/kg	1250
bis(2-Ethylhexyl)phthalate	210000	BMDL	447 ug/kg	820	BMDL		649 ug/kg	800			1390 ug/kg	760
Di-n-octyl phthalate	10000000	ND	0 ug/kg	820	ND		0 ug/kg	800	ND		0 ug/kg	760
Benzo(b)fluoranthene	4000		5660 ug/kg	400	ND		0 ug/kg	380			982 ug/kg	360
o(k)fluoranthene	4000	ND	0 ug/kg	210	ND		0 ug/kg	200	ND		0 ug/kg	190
(a)pyrene	660		5480 ug/kg	210	ND		0 ug/kg	200			426 ug/kg	190
Indeno(1,2,3-c,d)pyrene	4000		1720 ug/kg	390	ND		0 ug/kg	380	ND		0 ug/kg	360
Dibenzo(a,h)anthracene	660		626 ug/kg	210	ND		0 ug/kg	200	ND		0 ug/kg	190
Benzo(ghi)perylene			1600 ug/kg	340	ND		0 ug/kg	330	ND		0 ug/kg	310
Phenol	10000000											
2-Chlorophenol	5200000											
2-Nitrophenol												
2,4-Dimethylphenol	10000000											
2,4-Dichlorophenol	3100000											
p-Chloro-m-cresol												
2,4,6-Trichlorophenol	270000											
2,4-Dinitrophenol	2100000											
4-Nitrophenol												
4,6-Dinitro-o-cresol												
Pentachlorophenol	24000											
Aroclor 1016	2000											
Aroclor 1221	2000											
Aroclor 1242	2000											
Aroclor 1248	2000											
Aroclor 1254	2000											
Aroclor 1260	2000											
Aroclor 1232	2000											
INORGANICS												
Antimony	340000		3380000 ug/kg	7100	BMDL		7400 ug/kg	7600	BMDL		3900 ug/kg	7100
Arsenic	2000		1280000 ug/kg	1200			7600 ug/kg	1300			3700 ug/kg	1200
Beryllium	1000		520 ug/kg	120			340 ug/kg	130			480 ug/kg	120
Cadmium	100000		610 ug/kg	590	BMDL		480 ug/kg	640			630 ug/kg	590
mium			49000 ug/kg	1200			5400 ug/kg	1300			35000 ug/kg	1200
mer	600000		6100000 ug/kg	1200			74000 ug/kg	1300			203000 ug/kg	1200
Lead	600000		4E+07 ug/kg	5300			13000 ug/kg	5700			200000 ug/kg	5300
Mercury	270000		2200 ug/kg	94	BMDL		91 ug/kg	100			390 ug/kg	95

Parameters Not Analyzed

Parameters Not Analyzed

Parameters Not Analyzed

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase II Sampling Summary-AEC 21

Table 4.02.21-2

LE ID DUE TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC21-1A				AEC21-1B				AEC21-2A			
		0-0.5'				3.5-4'				0-0.5'			
		DAV810				DAV811				DAV807			
		930630				930630				930630			
Nickel	2400000	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Selenium	3100000	ND	0	ug/kg	5900		1800	ug/kg	1300	BMDL	120	ug/kg	590
Silver	4100000		4700	ug/kg	1200	ND	0	ug/kg	1300	ND	0	ug/kg	1200
Thallium	2000	BMDL	520	ug/kg	1200	ND	0	ug/kg	1300	ND	0	ug/kg	1200
Zinc	1500000		1790000	ug/kg	2400		210000	ug/kg	2500		210000	ug/kg	2400

843890179

PLE ID -TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC21-2B				AEC21-3A				AEC21-3B			
		3.5-4'				0-0.5'				3.5-4'			
		DAV806				DAV804				DAV805			
		930630				930630				930630			
Petroleum Hydrocarbons (IR)	10000 (mg/kg)	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
VOLATILE ORGANICS			1400	mg/kg	20.8		15.6	mg/kg	19.3		703	mg/kg	19.1
Methyl chloride													
Methyl bromide													
Dichlorodifluoromethane													
Vinyl chloride	7000												
Chloroethane													
Methylene chloride	210000												
Acrolein													
Acrylonitrile	5000												
Trichlorofluoromethane													
1,1-Dichloroethylene	150000												
1,1-Dichloroethane	1000000												
1,2-Trans-dichloroethylene	1000000												
Chloroform	28000												
1,2-Dichloroethane	24000												
1,1,1-Trichloroethane	420000												
Carbon tetrachloride	4000												
Dichlorobromomethane													
1,2-Dichloropropane	43000												
cis-1,3-Dichloropropylene	5000												
Trichloroethylene	54000												
Chlorodibromomethane	1000000												
(hloromethyl)ether													
Benzene	13000												
1,1,2-Trichloroethane	420000												
trans-1,3-Dichloropropylene	5000												
2-Chloroethylvinyl ether													
Bromoform	370000												
1,1,2,2-Tetrachloroethane	70000												
Tetrachloroethylene	6000												
Toluene	1000000												
Chlorobenzene	680000												
Ethylbenzene	1000000												
SEMI-VOLATILE ORG.													
N-Nitrosodimethylamine		ND	0 ug/kg	810	ND	0 ug/kg	790	ND	0 ug/kg	770			
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	460	ND	0 ug/kg	450	ND	0 ug/kg	440			
1,3-Dichlorobenzene	1000000	ND	0 ug/kg	150	ND	0 ug/kg	150	ND	0 ug/kg	150			
1,4-Dichlorobenzene	1000000	ND	0 ug/kg	360	ND	0 ug/kg	350	ND	0 ug/kg	340			
1,2-Dichlorobenzene	1000000	ND	0 ug/kg	150	ND	0 ug/kg	150	ND	0 ug/kg	150			
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	810	ND	0 ug/kg	790	ND	0 ug/kg	770			
Hexachloroethane	100000	ND	0 ug/kg	130	ND	0 ug/kg	130	ND	0 ug/kg	120			
bis(2-Chloroisopropyl)ether	1000000	ND	0 ug/kg	460	ND	0 ug/kg	450	ND	0 ug/kg	440			
Nitrobenzene	520000	ND	0 ug/kg	150	ND	0 ug/kg	150	ND	0 ug/kg	150			
Isophorone	1000000	ND	0 ug/kg	180	ND	0 ug/kg	170	ND	0 ug/kg	170			
bis(2-Chloroethoxy)methane		ND	0 ug/kg	430	ND	0 ug/kg	420	ND	0 ug/kg	410			
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	150	ND	0 ug/kg	150	ND	0 ug/kg	150			
Naphthalene	4200000	498	ug/kg	130		154	ug/kg	130		2310	ug/kg	120	
Hexachlorobutadiene	210000	ND	0 ug/kg	73	ND	0 ug/kg	71	ND	0 ug/kg	69			
Hexachlorocyclopentadiene	730000	ND	0 ug/kg	810	ND	0 ug/kg	790	ND	0 ug/kg	770			
Phoronaphthalene		ND	0 ug/kg	150	ND	0 ug/kg	150	ND	0 ug/kg	150			
ethyl phthalate	1000000	ND	0 ug/kg	410	ND	0 ug/kg	400	ND	0 ug/kg	380			
Acenaphthylene		BMDL	60.8	ug/kg	280	ND	0 ug/kg	280	BMDL	61.7	ug/kg	270	
2,6-Dinitrotoluene		ND	0 ug/kg	150	ND	0 ug/kg	150	ND	0 ug/kg	150			

Parameters Not Analyzed

Parameters Not Analyzed

Parameters Not Analyzed

PLE ID TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC21-2B			AEC21-3A			AEC21-3B			
		3.5-4'			0-0.5'			3.5-4'			
		DAV806			DAV804			DAV805			
		930630			930630			930630			
QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL
Acenaphthene	10000000	274 ug/kg	150	ND	0 ug/kg	150	ND	ND	238 ug/kg	150	150
2,4-Dinitrotoluene		ND	0 ug/kg	460	ND	0 ug/kg	450	ND	0 ug/kg	440	
Diethyl phthalate	10000000	ND	0 ug/kg	810	ND	0 ug/kg	790	ND	0 ug/kg	770	
Fluorene	10000000	295 ug/kg	150	ND	0 ug/kg	150	ND	ND	298 ug/kg	150	
4-Chlorophenyl phenyl ether		ND	0 ug/kg	340	ND	0 ug/kg	330	ND	0 ug/kg	320	
1,2-Diphenylhydrazine		ND	0 ug/kg	810	ND	0 ug/kg	790	ND	0 ug/kg	770	
N-Nitrosodiphenylamine	600000	ND	0 ug/kg	150	ND	0 ug/kg	150	ND	0 ug/kg	150	
4-Bromophenyl phenyl ether		ND	0 ug/kg	150	ND	0 ug/kg	150	ND	0 ug/kg	150	
Hexachlorobenzene	2000	ND	0 ug/kg	150	ND	0 ug/kg	150	ND	0 ug/kg	150	
Phenanthrene		2660 ug/kg	440	BMDL	301 ug/kg	430			2540 ug/kg	410	
Anthracene	10000000	624 ug/kg	150	ND	0 ug/kg	150			341 ug/kg	150	
Di-n-butyl phthalate	10000000	BMDL	537 ug/kg	810	BMDL	583 ug/kg	790	BMDL	542 ug/kg	770	
Fluoranthene	10000	4460 ug/kg	180		270 ug/kg	170			2590 ug/kg	170	
Pyrene	10000	3740 ug/kg	150		260 ug/kg	150			2590 ug/kg	150	
Benzidine		ND	0 ug/kg	3600	ND	0 ug/kg	3500	ND	0 ug/kg	3400	
Butyl benzyl phthalate	10000000	ND	0 ug/kg	810	ND	0 ug/kg	790	ND	0 ug/kg	770	
Benzo(a)anthracene	4000		2050 ug/kg	630	BMDL	144 ug/kg	620		1080 ug/kg	600	
Chrysene	40000		2920 ug/kg	200		367 ug/kg	200		1430 ug/kg	190	
3,3'-Dichlorobenzidine	6000	ND	0 ug/kg	1340	ND	0 ug/kg	1310	ND	0 ug/kg	1260	
bis(2-Ethylhexyl)phthalate	210000		1040 ug/kg	810		1810 ug/kg	790		2430 ug/kg	770	
Di-n-octyl phthalate	10000000	ND	0 ug/kg	810	ND	0 ug/kg	790	ND	0 ug/kg	770	
Benzo(b)fluoranthene	4000		4750 ug/kg	390	BMDL	255 ug/kg	380		1900 ug/kg	370	
Benzo(k)fluoranthene	4000	ND	0 ug/kg	200	ND	0 ug/kg	200	ND	0 ug/kg	190	
1(a)pyrene	660		1380 ug/kg	200	BMDL	114 ug/kg	200		1110 ug/kg	190	
...eno(1,2,3-c,d)pyrene	4000		1910 ug/kg	380	ND	0 ug/kg	370		446 ug/kg	360	
Dibenzo(a,h)anthracene	660		675 ug/kg	200	ND	0 ug/kg	200	BMDL	182 ug/kg	190	
Benzo(ghi)perylene			2180 ug/kg	330	ND	0 ug/kg	330		413 ug/kg	310	
Phenol	10000000										
2-Chlorophenol	5200000										
2-Nitrophenol											
2,4-Dimethylphenol	10000000										
2,4-Dichlorophenol	3100000										
p-Chloro-m-cresol											
2,4,6-Trichlorophenol	270000										
2,4-Dinitrophenol	2100000										
4-Nitrophenol											
4,6-Dinitro-o-cresol											
Pentachlorophenol	24000										
Aroclor 1016	2000										
Aroclor 1221	2000										
Aroclor 1242	2000										
Aroclor 1248	2000										
Aroclor 1254	2000										
Aroclor 1260	2000										
Aroclor 1232	2000										
INORGANICS											
Antimony	340000	11000 ug/kg	7300		17000 ug/kg	7000			9700 ug/kg	6900	
Arsenic	2000	44000 ug/kg	1200		1800000 ug/kg	1200			230000 ug/kg	1100	
Beryllium	1000	350 ug/kg	120		240 ug/kg	120			370 ug/kg	110	
Cadmium	100000	BMDL	480 ug/kg	610	BMDL	500 ug/kg	580		600 ug/kg	570	
Mercury	600000		7500 ug/kg	1200		7000 ug/kg	1200		18000 ug/kg	1100	
Lead	600000		100000 ug/kg	5500		95000 ug/kg	1200		136000 ug/kg	1100	
Mercury	270000		2900000 ug/kg	620	ug/kg	490000 ug/kg	5300		190000 ug/kg	5100	
			620 ug/kg	98		1500 ug/kg	94		450 ug/kg	91	
Parameters Not Analyzed											Parameters Not Analyzed
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PLE ID LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC21-2B				AEC21-3A				AEC21-3B			
		3.5-4'				0-0.5'				3.5-4'			
		DAV806				DAV804				DAV805			
		930630				930630				930630			
QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result	Unit	MDL	QA	Result
Nickel	2400000	15000	ug/kg	2400	18000	ug/kg	2300		13000	ug/kg	2300		
Selenium	3100000	BMDL	1100	ug/kg	1200	5600	ug/kg	2900	BMDL	880	ug/kg	2900	
Silver	4100000	ND	0	ug/kg	1200	ND	27	ug/kg	1200	BMDL	650	ug/kg	1100
Thallium	2000	ND	0	ug/kg	1200	ND	170	ug/kg	1200	ND	80	ug/kg	1100
Zinc	1500000	532000	ug/kg	2400	130000	ug/kg	2300		86000	ug/kg	2300		

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Table 4.02.21-2

PLE ID LTH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC21-4A				AEC21-4B			
		0-0.5'		3.5-4'					
		DAV808		DAV809					
		930630		930630					
Petroleum Hydrocarbons (IR)	10000 (mg/kg)	QA	Result	Unit	MDL	QA	Result	Unit	MDL
VOLATILE ORGANICS			116	mg/kg	18.3		21.2	mg/kg	20.6
Methyl chloride									
Methyl bromide									
Dichlorodifluoromethane									
Vinyl chloride	7000								
Chloroethane									
Methylene chloride	210000								
Acrolein									
Acrylonitrile	5000								
Trichlorofluoromethane									
1,1-Dichloroethylene	150000								
1,1-Dichloroethane	1000000								
1,2-Trans-dichloroethylene	1000000								
Chloroform	28000								
1,2-Dichloroethane	24000								
1,1,1-Trichloroethane	420000								
Carbon tetrachloride	4000								
Dichlorobromomethane									
1,2-Dichloropropane	43000								
cis-1,3-Dichloropropylene	5000								
Trichloroethylene	54000								
Chlorodibromomethane	1000000								
chloromethyl)ether									
benzene	13000								
1,1,2-Trichloroethane	420000								
trans-1,3-Dichloropropylene	5000								
2-Chloroethylvinyl ether									
Bromoform	370000								
1,1,2,2-Tetrachloroethane	70000								
Tetrachloroethylene	6000								
Toluene	1000000								
Chlorobenzene	680000								
Ethylbenzene	1000000								
SEMI-VOLATILE ORG.									
N-Nitrosodimethylamine		ND	0	ug/kg	820	ND	0	ug/kg	840
bis(2-Chloroethyl) ether	3000	ND	0	ug/kg	470	ND	0	ug/kg	480
1,3-Dichlorobenzene	10000000	ND	0	ug/kg	160	ND	0	ug/kg	160
1,4-Dichlorobenzene	10000000	ND	0	ug/kg	360	ND	0	ug/kg	370
1,2-Dichlorobenzene	10000000	ND	0	ug/kg	160	ND	0	ug/kg	160
N-Nitrosodi-n-propylamine	660	ND	0	ug/kg	820	ND	0	ug/kg	840
Hexachloroethane	100000	ND	0	ug/kg	130	ND	0	ug/kg	140
bis(2-Chloroisopropyl)ether	10000000	ND	0	ug/kg	470	ND	0	ug/kg	480
Nitrobenzene	520000	ND	0	ug/kg	160	ND	0	ug/kg	160
Isophorone	10000000	ND	0	ug/kg	180	ND	0	ug/kg	190
bis(2-Chloroethoxy)methane		ND	0	ug/kg	440	ND	0	ug/kg	450
1,2,4-Trichlorobenzene	1200000	ND	0	ug/kg	160	ND	0	ug/kg	160
Naphthalene	4200000	7600	ug/kg		130		1850	ug/kg	140
Hexachlorobutadiene	210000	ND	0	ug/kg	74	ND	0	ug/kg	76
Hexachlorocyclopentadiene	7300000	ND	0	ug/kg	820	ND	0	ug/kg	840
chloronaphthalene		ND	0	ug/kg	160	ND	0	ug/kg	160
ethyl phthalate	10000000	ND	0	ug/kg	410	ND	0	ug/kg	420
Acenaphthylene			1090	ug/kg	290	BMDL	102	ug/kg	300
2,6-Dinitrotoluene		ND	0	ug/kg	160	ND	0	ug/kg	160

Table 4.02.21-2

SLE ID D...TH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC21-4A				AEC21-4B			
		0-0.5' DAV808 930630				3.5-4' DAV809 930630			
		QA	Result	Unit	MDL	QA	Result	Unit	MDL
Acenaphthene	10000000		3010	ug/kg	160		414	ug/kg	160
2,4-Dinitrotoluene		ND	0	ug/kg	470	ND	0	ug/kg	480
Diethyl phthalate	10000000	ND	0	ug/kg	820	ND	0	ug/kg	840
Fluorene	10000000		5700	ug/kg	160		515	ug/kg	160
4-Chlorophenyl phenyl ether		ND	0	ug/kg	350	ND	0	ug/kg	350
1,2-Diphenylhydrazine		ND	0	ug/kg	820	ND	0	ug/kg	840
N-Nitrosodiphenylamine	600000	ND	0	ug/kg	160	ND	0	ug/kg	160
4-Bromophenyl phenyl ether		ND	0	ug/kg	160	ND	0	ug/kg	160
Hexachlorobenzene	2000	ND	0	ug/kg	160	ND	0	ug/kg	160
Phenanthrene			16500	ug/kg	440		1420	ug/kg	460
Anthracene	10000000		5050	ug/kg	160		261	ug/kg	160
Di-n-butyl phthalate	10000000	BMDL	472	ug/kg	820	BMDL	684	ug/kg	840
Fluoranthene	10000		17700	ug/kg	180		1000	ug/kg	190
Pyrene	10000		15900	ug/kg	160		725	ug/kg	160
Benzidine		ND	0	ug/kg	3600	ND	0	ug/kg	3700
Butyl benzyl phthalate	10000000	ND	0	ug/kg	320	ND	0	ug/kg	840
Benzo(a)anthracene	4000		6430	ug/kg	640	BMDL	212	ug/kg	660
Chrysene	40000		6850	ug/kg	210		345	ug/kg	210
3,3'-Dichlorobenzidine	6000	ND	0	ug/kg	1360	ND	0	ug/kg	1390
bis(2-Ethylhexyl)phthalate	210000		1260	ug/kg	820		981	ug/kg	840
Di-n-octyl phthalate	10000000	ND	0	ug/kg	820	ND	0	ug/kg	840
Benzo(b)fluoranthene	4000		9010	ug/kg	390	BMDL	239	ug/kg	410
Benzo(k)fluoranthene	4000	ND	0	ug/kg	210	ND	0	ug/kg	210
(a)pyrene	660		5140	ug/kg	210	BMDL	103	ug/kg	210
Indeno(1,2,3-c,d)pyrene	4000		2580	ug/kg	390	BMDL	71.2	ug/kg	400
Dibenzo(a,h)anthracene	660		907	ug/kg	210	ND	0	ug/kg	210
Benzo(ghi)perylene			2440	ug/kg	340	ND	0	ug/kg	350
Phenol	10000000								
2-Chlorophenol	5200000								
2-Nitrophenol									
2,4-Dimethylphenol	10000000								
2,4-Dichlorophenol	3100000								
p-Chloro-m-cresol									
2,4,6-Trichlorophenol	270000								
2,4-Dinitrophenol	2100000								
4-Nitrophenol									
4,6-Dinitro-o-cresol									
Pentachlorophenol	24000								
Aroclor 1016	2000								
Aroclor 1221	2000								
Aroclor 1242	2000								
Aroclor 1248	2000								
Aroclor 1254	2000								
Aroclor 1260	2000								
Aroclor 1232	2000								
INORGANICS									
Antimony	340000		9300	ug/kg	7500		10000	ug/kg	7800
Arsenic	2000		17000	ug/kg	1200		17600000	ug/kg	1300
Beryllium	1000		640	ug/kg	120		230	ug/kg	130
Cadmium	100000		2100	ug/kg	620	ND	0	ug/kg	650
Manganese			29000	ug/kg	1200		4800	ug/kg	1300
Lead	600000		365000	ug/kg	1200		27000	ug/kg	1300
Mercury	600000		32000000	ug/kg	5600		100000	ug/kg	5800
	270000		4000	ug/kg	100	BMDL	82	ug/kg	100

Parameters Not Analyzed

Parameters Not Analyzed

Table 4.02.21-2

LE ID L... H LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	AEC21-4A				AEC21-4B			
		0-0.5'				3.5-4'			
		DAV808				DAV809			
		930630				930630			
QA	Result	Unit	MDL	QA	Result	Unit	MDL		
Nickel	2400000	21000	ug/kg	2500		9500	ug/kg	2600	
Selenium	3100000	BMDL	1100	ug/kg	1200	BMDL	820	ug/kg	1300
Silver	4100000	BMDL	1100	ug/kg	1200	ND	40	ug/kg	1300
Thallium	2000	ND	42	ug/kg	1200	ND	43	ug/kg	1300
Zinc	1500000		1050000	ug/kg	2500		130000	ug/kg	2600

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4.02.22 AEC #22 - RCRA Waste Drum Storage Area

AEC #22 is the RCRA storage area which is located north of the wastewater treatment plant adjacent to the railroad tracks. Sampling was not conducted in this area since this area was addressed as part of the facility's RCRA Closure Program. A RCRA Closure Certification Report was submitted to the NJDEPE on October 10, 1991 and RCRA Closure Certification was received from the NJDEPE on December 16, 1991.

AEC #22 is presented as Figure 4-22.

4.02.23 AEC #23 - Former Stormwater Outfall

AEC #23 is located west of the wastewater treatment plant and borders on the Passaic River. The outfall was sealed by the facility in 1988.

AEC #23 is presented as Figure 4-23.

Phase I Sampling Program

A total of four samples were collected from the outfall for site specific parameters.

Two samples of the four collected were analyzed for TPH, PP Metals and BNA+25.

The other two samples were analyzed for VO+15. The analytical results indicate that the constituents from the TPH and VO+15 analysis are below the NJDEPE's NRDC soil cleanup criteria. The BN+15 analytical results indicate the following constituents exceeding the NJDEPE's NRDC soil cleanup criteria:

- BIS
- N-Nitrosodi-n-propylamine

The PP Metals analytical results indicate that the following constituent exceeds the NJDEPE's NRDC soil cleanup criteria:

- Arsenic

Phase I analytical results collected for AEC #23 are presented as Table 4.02.23-1.

Phase II Sampling Program

No soil samples were collected from this AEC during the Phase II sampling program. Post-excavation sampling will be performed during site remediation.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 23

Table 4.02.23-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC23-ADD1 0-0.5' 910312 FC2021	S AEC23-ADD2 0-0.5' 910312 FC2022	S AEC23ADD1A 1.5-2' 910312 FC2014	S AEC23ADD2A 1.5-2' 910312 FC2015
Petroleum Hydrocarbons (IR)	10000 mg/kg	498	3930	-	-
VOLATILE ORGANICS					
Acrolein	ug/kg	-	-	< 110	< 110
Acrylonitrile	5000 ug/kg	-	-	< 110	< 110
Benzene	13000 ug/kg	-	-	< 5.0	< 4.9
bis(Chloromethyl)ether	ug/kg	-	-	< 11	< 11
Bromoform	370000 ug/kg	-	-	< 5.3	< 5.2
Carbon tetrachloride	4000 ug/kg	-	-	< 3.2	< 3.1
Chlorobenzene	680000 ug/kg	-	-	< 6.8	< 6.7
Chlorodibromomethane	1000000 ug/kg	-	-	< 3.5	< 3.5
Chloroethane	ug/kg	-	-	< 11	< 11
2-Chloroethylvinyl ether	ug/kg	-	-	< 11	< 11
Chloroform	28000 ug/kg	-	-	< 1.8	< 1.8
Dichlorobromomethane	ug/kg	-	-	< 2.5	< 2.5
Dichlorodifluoromethane	ug/kg	-	-	< 11	< 11
1,1-Dichloroethane	1000000 ug/kg	-	-	< 5.3	< 5.2
1,2-Dichloroethane	24000 ug/kg	-	-	< 3.2	< 3.1
1,1-Dichloroethylene	150000 ug/kg	-	-	< 3.2	< 3.1
1,2-Dichloropropane	43000 ug/kg	-	-	< 6.8	< 6.7
cis-1,3-Dichloropropylene	5000 ug/kg	-	-	< 5.6	< 5.6
Ethylbenzene	1000000 ug/kg	-	-	< 8.1	< 8.0
Methyl bromide	ug/kg	-	-	< 11	< 11
Methyl chloride	ug/kg	-	-	< 11	< 11
Methylene chloride	210000 ug/kg	-	-	5.03	< 3.1
1,1,2,2-Tetrachloroethane	70000 ug/kg	-	-	< 7.8	< 7.7
Tetrachloroethylene	6000 ug/kg	-	-	< 4.6	< 4.6
Toluene	1000000 ug/kg	-	-	< 6.8	< 6.7
1,2-Trans-dichloroethylene	1000000 ug/kg	-	-	< 1.8	< 1.8
1,1,1-Trichloroethane	420000 ug/kg	-	-	< 4.3	< 4.2
1,1,2-Trichloroethane	420000 ug/kg	-	-	< 5.6	< 5.6
Trichloroethylene	54000 ug/kg	-	-	< 2.1	< 2.1
Trichlorofluoromethane	ug/kg	-	-	< 11	< 11
Vinyl chloride	7000 ug/kg	-	-	< 11	< 11
trans-1,3-Dichloropropylene	5000 ug/kg	-	-	< 11	< 11
SEMI-VOLATILE ORG.					
Acenaphthene	10000000 ug/kg	< 210	< 200	-	-
Acenaphthylene	ug/kg	< 380	< 370	-	-
Anthracene	10000000 ug/kg	< 210	< 200	-	-
Benzidine	ug/kg	< 4800	< 4700	-	-
Benzo(a)anthracene	4000 ug/kg	< 850	< 830	-	-
Benzo(a)pyrene	660 ug/kg	401	< 260	-	-
Benzo(b)fluoranthene	4000 ug/kg	< 520	< 510	-	-
Benzo(ghi)perylene	ug/kg	< 440	< 430	-	-
Benzo(k)fluoranthene	4000 ug/kg	< 270	< 260	-	-
bis(2-Chloroethoxy)methane	ug/kg	< 570	< 560	-	-
bis(2-Chloroethyl) ether	3000 ug/kg	< 620	< 600	-	-
bis(2-Chloroisopropyl)ether	10000000 ug/kg	< 620	< 600	-	-
bis(2-Ethylhexyl)phthalate	210000 ug/kg	135000	2970000	-	-
4-Broniophenyl phenyl ether	ug/kg	< 210	< 200	-	-
Butyl benzyl phthalate	1000000 ug/kg	< 1100	< 1100	-	-
2-Chloronaphthalene	ug/kg	< 210	< 200	-	-
4-Chlorophenyl phenyl ether	ug/kg	< 460	< 440	-	-
Chrysene	40000 ug/kg	298	< 260	-	-
Dibenzo(a,h)anthracene	660 ug/kg	< 270	< 260	-	-

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

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BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Phase I Sampling Summary - AEC 23

Table 4.02.23-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non-Residential Direct Contact Cleanup Standards	S AEC23-ADD1 0-0.5' 910312 FC2021	S AEC23-ADD2 0-0.5' 910312 FC2022	S AEC23ADD1A 1.5-2' 910312 FC2014	S AEC23ADD2A 1.5-2' 910312 FC2015
1,2-Dichlorobenzene	1000000 ug/kg	< 210	< 200	-	-
1,3-Dichlorobenzene	1000000 ug/kg	< 210	< 200	-	-
1,4-Dichlorobenzene	1000000 ug/kg	< 480	< 470	-	-
3,3'-Dichlorobenzidine	6000 ug/kg	< 1790	< 1750	-	-
Diethyl phthalate	1000000 ug/kg	< 1100	< 1100	-	-
Dimethyl phthalate	1000000 ug/kg	< 1100	< 1100	-	-
Di-n-butyl phthalate	1000000 ug/kg	< 1100	37200	-	-
2,4-Dinitrotoluene	ug/kg	< 620	< 600	-	-
2,6-Dinitrotoluene	ug/kg	< 210	< 200	-	-
Di-n-octyl phthalate	1000000 ug/kg	< 1100	< 1100	-	-
1,2-Diphenylhydrazine	ug/kg	< 1100	< 1100	-	-
Fluoranthene	10000 ug/kg	< 240	< 230	-	-
Fluorene	1000000 ug/kg	< 210	< 200	-	-
Hexachlorobenzene	2000 ug/kg	< 210	< 200	-	-
Hexachlorobutadiene	210000 ug/kg	< 98	< 95	-	-
Hexachlorocyclopentadiene	7300000 ug/kg	< 1100	< 1100	-	-
Hexachloroethane	100000 ug/kg	< 170	< 170	-	-
Indeno(1,2,3-c,d)pyrene	4000 ug/kg	< 400	< 390	-	-
Isophorone	1000000 ug/kg	< 240	< 230	-	-
Naphthalene	4200000 ug/kg	< 170	231	-	-
Nitrobenzene	520000 ug/kg	< 210	< 200	-	-
N-Nitrosodimethylamine	ug/kg	< 1100	< 1100	-	-
N-Nitrosodi-n-propylamine	660 ug/kg	< 1100	< 1100	-	-
N-Nitrosodiphenylamine	600000 ug/kg	< 210	< 200	-	-
Phenanthrene	ug/kg	< 590	< 570	-	-
Pyrene	10000 ug/kg	240	291	-	-
1,2,4-Trichlorobenzene	1200000 ug/kg	< 210	< 200	-	-
2-Chlorophenol	5200000 ug/kg	< 360	< 350	-	-
2,4-Dichlorophenol	3100000 ug/kg	< 290	< 290	-	-
2,4-Dimethylphenol	10000000 ug/kg	< 290	< 290	-	-
4,6-Dinitro-o-cresol	ug/kg	< 2600	< 2500	-	-
2,4-Dinitrophenol	2100000 ug/kg	< 4600	< 4400	-	-
2-Nitrophenol	ug/kg	< 390	< 380	-	-
4-Nitrophenol	ug/kg	< 260	< 250	-	-
p-Chloro-m-cresol	ug/kg	< 330	< 320	-	-
Pentachlorophenol	24000 ug/kg	< 390	< 380	-	-
Phenol	1000000 ug/kg	< 160	< 160	-	-
2,4,6-Trichlorophenol	270000 ug/kg	< 290	< 290	-	-
INORGANICS					
Antimony	340000 ug/kg	< 6700	< 6500	-	-
Arsenic	2000 ug/kg	2100	1100	-	-
Beryllium	1000 ug/kg	120	340	-	-
Cadmium	100000 ug/kg	700	< 220	-	-
Chromium	ug/kg	48000	14000	-	-
Copper	600000 ug/kg	39000	17000	-	-
Lead	600000 ug/kg	27000	7400	-	-
Mercury	270000 ug/kg	220	< 87	-	-
Nickel	2400000 ug/kg	9500	8600	-	-
Selenium	3100000 ug/kg	< 560	< 540	-	-
Silver	4100000 ug/kg	< 1100	< 1100	-	-
Thallium	2000 ug/kg	< 1100	< 1100	-	-
Vanadium	7100000 ug/kg	13000	18000	-	-
Zinc	1500000 ug/kg	93000	33000	-	-

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "--" symbol indicates that analysis was not performed for a given analyte.

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4.02.24 AEC #24 - Instrument Shop, Environmental Lab, and Maintenance Office Area

AEC #24 is located north of the Batch Ester plant and borders on the north property line. This area includes an instrument shop, environmental lab, and maintenance office. A transformer pad is located on the north side of the maintenance building.

AEC #24 is presented in Figure 4-24.

Phase I Sampling Program

Two samples, one chip and one soil sample were collected in this area for PCB analysis. The PCB analytical results are below the NJDEPE's NRDC soil cleanup criteria.

Phase I analytical results for the samples collected in AEC #24 are presented in Table 4.02.24-1.

Phase II Sampling Program

No samples were taken during this sampling program. AEC #24 is not considered a RCRA unit but is considered an AEC under ECRA Case # 90537.

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Phase I Sampling Summary - AEC 24*

Table 4.02.24-1

SAMPLE ID DEPTH DATE LAB ID	NJDEPE Non- Residential Direct Contact Cleanup Standards	S AEC24-1 0-0.5' 910118 FB9861	X AEC24CH1 Chip 910124 FC0290
SEMI-VOLATILE ORG.			
Aroclor 1016	2000 ug/kg	< 58	< 53
Aroclor 1221	2000 ug/kg	< 58	< 53
Aroclor 1232	2000 ug/kg	< 58	< 53
Aroclor 1242	2000 ug/kg	< 58	< 53
Aroclor 1248	2000 ug/kg	< 58	< 53
Aroclor 1254	2000 ug/kg	< 120	< 110
Aroclor 1260	2000 ug/kg	< 120	< 110

Note: Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

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4.02.25 AEC #25 - Pump House

AEC #25 is located adjacent to the former stormwater outfall on the southern border of the facility next to the Passaic River. This building contained an emergency diesel generator for pumping water.

AEC #25 is presented as Figure 4-25.

Phase I Sampling Program

No soil sampling was conducted during the Phase I sampling program.

Phase II Sampling Program

One soil sample was collected from AEC #25 at a depth of 18-24" below grade. This sample was analyzed for TPH and BN+15. The analytical results indicate the following constituents to exist at concentrations exceeding the NJDEPE's NRDC soil cleanup criteria. TPH and Pyrene were found at 28,800 mg/kg and 1.0 mg/kg, respectively.

The Phase II analytical results for the sample collected in AEC #25 are presented in Table 4.02.25-1.

Table 4.02.25-1

PLE ID LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	VENT-1			
		QA	Result	Unit	MDL
Petroleum Hydrocarbons (IR)	10000 (mg/kg)		28800	mg/kg	19.8
VOLATILE ORGANICS					
Methyl chloride					
Methyl bromide					
Dichlorodifluoromethane					
Vinyl chloride	7000				
Chloroethane					
Methylene chloride	210000				
Acrolein					
Acrylonitrile	5000				
Trichlorofluoromethane					
1,1-Dichloroethylene	150000				
1,1-Dichloroethane	1000000				
1,2-Trans-dichloroethylene	1000000				
Chloroform	28000				
1,2-Dichloroethane	24000				
1,1,1-Trichloroethane	420000				
Carbon tetrachloride	4000				
Dichlorobromomethane					
1,2-Dichloropropane	43000				
cis-1,3-Dichloropropylene	5000				
Trichloroethylene	54000				
Chlorodibromomethane	1000000				
Chloromethyl)ether					
benzene	13000				
1,1,2-Trichloroethane	420000				
trans-1,3-Dichloropropylene	5000				
2-Chloroethylvinyl ether					
Bromoform	370000				
1,1,2,2-Tetrachloroethane	70000				
Tetrachloroethylene	6000				
Toluene	1000000				
Chlorobenzene	680000				
Ethylbenzene	1000000				
SEMI-VOLATILE ORG.					
N-Nitrosodimethylamine		ND	0 ug/kg	78000	
bis(2-Chloroethyl) ether	3000	ND	0 ug/kg	45000	
1,3-Dichlorobenzene	10000000	ND	0 ug/kg	15000	
1,4-Dichlorobenzene	10000000	ND	0 ug/kg	35000	
1,2-Dichlorobenzene	10000000	ND	0 ug/kg	15000	
N-Nitrosodi-n-propylamine	660	ND	0 ug/kg	78000	
Hexachloroethane	100000	ND	0 ug/kg	13000	
bis(2-Chloroisopropyl)ether	10000000	ND	0 ug/kg	45000	
Nitrobenzene	520000	ND	0 ug/kg	15000	
Isophorone	10000000	ND	0 ug/kg	17000	
bis(2-Chloroethoxy)methane		ND	0 ug/kg	42000	
1,2,4-Trichlorobenzene	1200000	ND	0 ug/kg	15000	
Naphthalene	4200000	ND	0 ug/kg	13000	
Hexachlorobutadiene	210000	ND	0 ug/kg	7100	
Hexachlorocyclopentadiene	7300000	ND	0 ug/kg	78000	
Phoronaphthalene		ND	0 ug/kg	15000	
ethyl phthalate	10000000	ND	0 ug/kg	39000	
Acenaphthylene		ND	0 ug/kg	27000	
2,6-Dinitrotoluene		ND	0 ug/kg	15000	

Parameters Not Analyzed

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Table 4.02.25-I

LE ID LH LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	VENT-1			
		1.5-2' DAV815 930701			
		QA	Result	Unit	MDL
Acenaphthene	10000000	BMDL	9800	ug/kg	15000
2,4-Dinitrotoluene		ND	0	ug/kg	45000
Diethyl phthalate	10000000	ND	0	ug/kg	78000
Fluorene	10000000	BMDL	13000	ug/kg	15000
4-Chlorophenyl phenyl ether		ND	0	ug/kg	33000
1,2-Diphenylhydrazine		ND	0	ug/kg	78000
N-Nitrosodiphenylamine	600000	ND	0	ug/kg	15000
4-Bromophenyl phenyl ether		ND	0	ug/kg	15000
Hexachlorobenzene	2000	ND	0	ug/kg	15000
Phenanthrene		BMDL	22100	ug/kg	42000
Anthracene	10000000	ND	0	ug/kg	15000
Di-n-butyl phthalate	10000000	ND	0	ug/kg	78000
Fluoranthene	10000	ND	0	ug/kg	17000
Pyrene	10000	BMDL	10000	ug/kg	15000
Benzidine		ND	0	ug/kg	350000
Butyl benzyl phthalate	10000000	ND	0	ug/kg	78000
Benzo(a)anthracene	4000	ND	0	ug/kg	61000
Chrysene	40000	ND	0	ug/kg	20000
3,3'-Dichlorobenzidine	6000	ND	0	ug/kg	129000
bis(2-Ethylhexyl)phthalate	210000	BMDL	36200	ug/kg	78000
Di-n-octyl phthalate	10000000	ND	0	ug/kg	78000
Benzo(b)fluoranthene	4000	ND	0	ug/kg	38000
Benzo(k)fluoranthene	4000	ND	0	ug/kg	20000
a)pyrene	660	ND	0	ug/kg	20000
hexa(1,2,3-c,d)pyrene	4000	ND	0	ug/kg	37000
Dibenzo(a,h)anthracene	660	ND	0	ug/kg	20000
Benzo(ghi)perylene		ND	0	ug/kg	32000
Phenol	10000000				
2-Chlorophenol	5200000				
2-Nitrophenol					
2,4-Dimethylphenol	10000000				
2,4-Dichlorophenol	3100000				
p-Chloro-m-cresol					
2,4,6-Trichlorophenol	270000				
2,4-Dinitrophenol	2100000				
4-Nitrophenol					
4,6-Dinitro-o-cresol					
Pentachlorophenol	24000				
Aroclor 1016	2000				
Aroclor 1221	2000				
Aroclor 1242	2000				
Aroclor 1248	2000				
Aroclor 1254	2000				
Aroclor 1260	2000				
Aroclor 1232	2000				
INORGANICS					
Antimony	340000				
Arsenic	2000				
Beryllium	1000				
Cadmium	100000				
Cerium	600000				
Lead	600000				
Mercury	270000				

Parameters Not Analyzed

Parameters Not Analyzed

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Table 4.02.25-1

SLE ID LAB ID DATE	NJDEPE Non-Residential Direct Contact Soil Criteria (ug/kg)	VENT-1			
		QA	Result	Unit	MDL
Nickel	2400000				
Selenium	3100000				
Silver	4100000				
Thallium	2000				
Zinc	1500000		Parameters Not Analyzed		

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4.02.26 Bis (2-Ethylhexyl)phthalate Data Summary

A table has been compiled of BIS found in the soil samples collected. This table of BIS results is a compilation of the grid point sampling, Phase I soil sampling, and Phase II soil sampling. These results are compared against the NJDEPE's NRDC soil cleanup criteria. A total of 181 bis(2-ethylhexyl)phthalate analytical results have been compiled. Of these 181 analytical results, 42 exceed the NJDEPE's NRDC soil cleanup criteria of 210 mg/kg. The results range from of 240 mg/kg to 16,300 mg/kg.

The BIS compilation of analytical results are presented in Table 4.02.26-1.

BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Summary of Bis(2-ethylhexyl)phthalate Results (all samples)

Table 4.02.26-1

Exceeds NJDEPE Non-Residential Direct Contact Criteria of 210 mg/kg

Sample ID	Date	Lab ID	QA	Result	Units	MDL
ADDFB1	910311	FC1934	ND	0	mg/l	0.012
ADDFB2	910312	FC2007	ND	0	mg/l	0.01
ADDFB3	910312	FC2006	ND	0	mg/l	0.011
ADDFB4	910313	FC2100	ND	0	mg/l	0.01
AEC12-ADD1	910313	FC2101		376	mg/kg	5.9
AEC15-1	910118	FB9863		85.1	mg/kg	1.2
AEC15-2	910118	FB9864		57.2	mg/kg	1.2
AEC15-3	910118	FB9862		12100	mg/kg	1.2
AEC17ADD1B	910312	FC2020	ND	0	mg/kg	1.1
AEC17ADD2B	910312	FC2019	ND	0	mg/kg	1.2
AEC17-ADD1	910312	FC2017		57.4	mg/kg	1.1
AEC17-ADD2	910312	FC2018		3190	mg/kg	1.1
AEC18-ADD1	910311	FC1945		5.64	mg/kg	1.1
AEC1-1	910118	FB9867		1.61	mg/kg	1.1
AEC1-2	930629	DAU626		3.72	mg/kg	0.74
AEC1-2	910118	FB9869		5220	mg/kg	60
AEC1-3	930629	DAU625		807	mg/kg	7.5
AEC1-4	930629	DAU627		285	mg/kg	10
AEC1-5	930629	DAU628		11	mg/kg	0.76
AEC21RR1A	910311	FC1936		453	mg/kg	1.1
AEC21RR1B	910311	FC1937		932	mg/kg	1
AEC21RR1C	910311	FC1946		305	mg/kg	1.4
AEC21RR1D	910312	FC2027		2600	mg/kg	1.2
AEC21RR1E	910312	FC2028	ND	0	mg/kg	1.1
AEC21RR2A	910311	FC1938		1350	mg/kg	1.2
AEC21RR2B	910311	FC1947		349	mg/kg	1.2
AEC21RR2C	910311	FC1939	BMDL	0.309	mg/kg	1.3
AEC21RR3A	910311	FC1940		22.4	mg/kg	1.3
AEC21RR3B	910312	FC2025		367	mg/kg	1.2
AEC21RR3C	910312	FC2026		14.7	mg/kg	1.2
AEC21RR4A	910312	FC2029	ND	0	mg/kg	1.2
AEC21RR4B	910312	FC2030		1.41	mg/kg	1.2
AEC21RR4C	910312	FC2031		1.41	mg/kg	1.3
AEC21RR4D	910312	FC2032	ND	0	mg/kg	1.2
AEC21-1A	930630	DAV810	BMDL	0.447	mg/kg	0.82
AEC21-1B	930630	DAV811	BMDL	0.649	mg/kg	0.8
AEC21-2A	930630	DAV807		1.39	mg/kg	0.76
AEC21-2B	930630	DAV806		1.04	mg/kg	0.81
AEC21-3A	930630	DAV804		1.81	mg/kg	0.79
AEC21-3B	930630	DAV805		2.43	mg/kg	0.77
AEC21-4A	930630	DAV808		1.26	mg/kg	0.82
AEC21-4B	930630	DAV809		0.981	mg/kg	0.84

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Table 4.02.26-1

Exceeds NJDEPE Non-Residential Direct Contact Criteria of 210 mg/kg

Sample ID	Date	Lab ID	QA	Result	Units	MDL
AEC23-ADD1	910312	FC2021		135	mg/kg	1.1
AEC23-ADD2	910312	FC2022		2970	mg/kg	1.1
AEC2-1	910118	FB9872	ND	0	mg/kg	12
AEC2-1A	930629	DAU621		2.91	mg/kg	0.73
AEC2-1B	930629	DAU622		1670	mg/kg	0.72
AEC2-2	910118	FB9873	BMDL	0.413	mg/kg	1.2
AEC2-2A	930629	DAU623		12000	mg/kg	0.71
AEC2-2B	930629	DAU624		13100	mg/kg	0.75
AEC2-3	910118	FB9870		1.2	mg/kg	1.2
AEC2-3A	930629	DAU609		590	mg/kg	0.71
AEC2-3B	930629	DAU610		3320	mg/kg	0.74
AEC2-4	910118	FB9871	ND	0	mg/kg	11
AEC2-4A	930629	DAU611		38.7	mg/kg	0.71
AEC2-4B	930629	DAU612		24.2	mg/kg	0.76
AEC2-5	910118	FB9868		4.63	mg/kg	1.1
AEC2-5A	930629	DAU613		68.9	mg/kg	0.71
AEC2-5B	930629	DAU614		872	mg/kg	0.71
AEC2-6	910118	FB9866		4.25	mg/kg	1.1
AEC2-6A	930629	DAU615		61.3	mg/kg	3.7
AEC2-6B	930629	DAU616		2000	mg/kg	0.74
AEC2-7A	930629	DAU617		7.08	mg/kg	0.7
AEC2-7B	930629	DAU618		9.64	mg/kg	0.72
AEC2-8A	930629	DAU619		1460	mg/kg	7.3
AEC2-8B	930629	DAU620		309	mg/kg	0.73
AEC2-9A	930630	DAV802		240	mg/kg	3.7
AEC2-9B	930630	DAV803		255	mg/kg	0.69
AEC2-ADD1	910311	FC1935		110	mg/kg	1.3
AEC3-ADD1	910312	FC2023		2.23	mg/kg	1.1
AEC3-ADD2	910312	FC2024	BMDL	0.97	mg/kg	1.1
AEC4CH1	910122	FB9988		50.8	mg/kg	1
AEC5-1	930630	DAV812		3.1	mg/kg	0.78
AEC5-2	930630	DAV813		121	mg/kg	3.7
AEC5-3	930630	DAV814		37.7	mg/kg	0.69
AEC5-ADD1	910312	FC2011		3640	mg/kg	1.3
AEC6-1	930628	DAU603		32.5	mg/kg	7.5
AEC8-ADD1	910312	FC2008	ND	0	mg/kg	1.1
AEC9-ADD1	910312	FC2009		35.3	mg/kg	1.1
AEC9-ADD1B	910312	FC2010		15.8	mg/kg	1.1
AECFB6	910118	FB9865	ND	0	mg/l	0.01
B1AAEC16	910115	FB9726		4.02	mg/kg	1.1
B1BAEC16	910115	FB9727		1.76	mg/kg	1.3
B2AAEC16	910115	FB9728		4.9	mg/kg	1.2

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Table 4.02.26-1

Exceeds NJDEPE Non-Residential Direct Contact Criteria of 210 mg/kg

Sample ID	Date	Lab ID	QA	Result	Units	MDL
B2BAEC16	910115	FB9725	BMDL	0.31	mg/kg	1.6
B3BAEC16	910115	FB9724	BMDL	0.296	mg/kg	1.3
B4AAEC16	910115	FB9723		4.07	mg/kg	1.1
B4BAEC16	910115	FB9729	ND	0	mg/kg	1.3
CHIPFB	910122	FB9990	ND	0	mg/l	0.01
S000W100	901217	FB8898	BMDL	4.26	mg/kg	6.3
S000W1000	901219	FB8985	BMDL	1.14	mg/kg	1.2
S000W1100	901219	FB8958	BMDL	3.01	mg/kg	5.8
S000W200	901217	FB8897		5.93	mg/kg	1.3
S000W400	901219	FB8966	ND	0	mg/kg	5.8
S000W500	901219	FB8987		2.82	mg/kg	1.2
S000W600	901219	FB8965		15.2	mg/kg	5.4
S000W700	901219	FB8982		6.25	mg/kg	1.1
S000W800	901219	FB8983		8.48	mg/kg	1
S1000W300	901220	FB9039		158	mg/kg	1
S1000W400	901220	FB9037		644	mg/kg	1.2
S1000W500	901220	FB9016		181	mg/kg	1
S100W100	901217	FB8903	BMDL	2.93	mg/kg	6.7
S100W200	901217	FB8904		7.73	mg/kg	5.2
S100W500R	901220	FB9803		136	mg/kg	1
S100W600	901219	FB8964	BMDL	2.5	mg/kg	5.7
S100W900	901219	FB8959	BMDL	0.718	mg/kg	1.1
S1100W300	901220	FB9018		29.6	mg/kg	1.1
S1100W300R	901220	FB9804		4.12	mg/kg	1.1
S1200W100	910125	FC0288		2670	mg/kg	1.1
S1200W200	901220	FB9027		1600	mg/kg	1.1
S1300W200R	901220	FB9026		19.3	mg/kg	1.1
S1300W200R	901220	FB9812		4.53	mg/kg	1.1
S200W1000	901219	FB8970		27.4	mg/kg	1.2
S200W1100	901219	FB8968		71.7	mg/kg	1
S200W400	901220	FB9024		11.6	mg/kg	1.1
S200W400R	901220	FB9810		3.22	mg/kg	1.1
S200W500	901220	FB9021		23.9	mg/kg	1.1
S200W500R	901220	FB9807		20.7	mg/kg	1.1
S200W600	901219	FB8963		114	mg/kg	6
S300W100	901217	FB8902	BMDL	3.23	mg/kg	5.6
S300W1100	901219	FB8960		71.7	mg/kg	1.1
S300W300	901219	FB8979	BMDL	0.809	mg/kg	1.1
S300W400	901220	FB9032		66.7	mg/kg	1
S300W500	901220	FB9031		44.4	mg/kg	1.1
S300W600	901219	FB8978		57.1	mg/kg	11
S300W900	901219	FB8971		99	mg/kg	1

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BASF Corporation
 Kearny, New Jersey
 ECRA Case #90537
 Summary of Bis(2-ethylhexyl)phthalate Results (all samples)

Table 4.02.26-1

Exceeds NJDEPE Non-Residential Direct Contact Criteria of 210 mg/kg

Sample ID	Date	Lab ID	QA	Result	Units	MDL
S400W200	90125	FC0286		1.14	mg/kg	1.1
S400W300	90129	FB8981		180	mg/kg	1
S400W400	90124	FC0291		92.7	mg/kg	1.1
S400W600	901220	FB9022		17.1	mg/kg	1.1
S400W600R	901220	FB9808		30.1	mg/kg	1.1
S400W900	901219	FB8961		10.2	mg/kg	5.1
S500W200	901220	FB9020		24.2	mg/kg	1
S500W200R	901220	FB9806		11.2	mg/kg	1
S500W300	901219	FB8980		264	mg/kg	1
S500W400	901220	FB9034		1420	mg/kg	1.1
S500W500	901220	FB9033		13.1	mg/kg	10
S500W600	901220	FB9023		140	mg/kg	1
S500W600R	901220	FB9809		115	mg/kg	5.1
S500W900	901219	FB8976		20.2	mg/kg	1.1
S600W1000	901219	FB8962		12.1	mg/kg	5.6
S600W200	901220	FB9041		130	mg/kg	1
S600W300	901220	FB9025		111	mg/kg	5.1
S600W300R	901220	FB9811		156	mg/kg	5.1
S600W400	90124	FC0293		38.6	mg/kg	1.1
S600W600	901219	FB8975		30.3	mg/kg	1.1
S600W900	901219	FB8977		14.6	mg/kg	1.1
S700W200	901220	FB9042		17.3	mg/kg	1.2
S700W300	901220	FB9030		1790	mg/kg	1.1
S700W700	90124	FC0295		9.09	mg/kg	1.1
S800W300	901220	FB9029		436	mg/kg	1
S800W400	90124	FC0292		6450	mg/kg	12
S800W700	901220	FB9015		27.7	mg/kg	1.2
S800W700R	901220	FB9802		25.6	mg/kg	1.2
S900W100	901220	FB9019		10.1	mg/kg	1
S900W100R	901220	FB9805		17.6	mg/kg	1
S900W200	901220	FB9040		88.2	mg/kg	1
S900W300	901220	FB9038		511	mg/kg	1.1
S900W400	90125	FC0287		820	mg/kg	1.1
S900W600	901220	FB9036		1.09	mg/kg	1.1
SB10AAEC16	910117	FB9853	BMDL	3.55	mg/kg	11
SB10BAEC16	910117	FB9854	BMDL	0.888	mg/kg	1.2
SB1AEC1	910114	FB9644		1720	mg/kg	47
SB1AEC2	910114	FB9645	BMDL	0.874	mg/kg	1.2
SB2AEC2	910114	FB9646		20.1	mg/kg	1.2
SB5BAEC16	910116	FB9783	BMDL	0.366	mg/kg	1.4
SB6BAEC16	910116	FB9784	BMDL	0.187	mg/kg	1.2
SB7BAEC16	910117	FB9849	ND	0	mg/kg	16

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Table 4.02.26-1

Exceeds NJDEPE Non-Residential Direct Contact Criteria of 210 mg/kg

Sample ID	Date	Lab ID	QA	Result	Units	MDL
SB8AAEC16	910117	FB9850	ND	0	mg/kg	1.5
SB8BAEC16	910117	FB9851		3.55	mg/kg	1.7
SB9BAEC16	910117	FB9852	ND	0	mg/kg	1.3
SBFB	910116	FB9785	ND	0	mg/l	0.011
SBFB	910117	FB9855	ND	0	mg/l	0.011
SOILFB15	910115	FB9730	ND	0	mg/l	0.01
TP#19	901220	FB9017		7200	mg/kg	1.1
TP#26	901220	FB9043		4090	mg/kg	1.1
TP#26R	901220	FB9813		112	mg/kg	1.1
TP#28	901220	FB9044		13100	mg/kg	1.1
TP#28R	901220	FB9814		16300	mg/kg	1.1
VENT-1	930701	DAV815	BMDL	36.2	mg/kg	78
WW-1	930701	DAV816		5720	mg/kg	15

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4.03 Grid Sampling Analytical Presentation

4.03.1 General

This section is a discussion of the Phase I Grid Sampling Program conducted to evaluate overall site characteristics to the current NJDEPE Soil Cleanup Criteria. The grid points occur at one hundred foot intervals. The points were surveyed and field located by a New Jersey licensed surveyor. Grid points were biased toward or away from sample locations addressed in the AEC sampling program to facilitate sample location when the grid point coincided with a structure. The biasing of the grid points never exceeded seven feet in any direction from a surveyed grid point location. The following section describes the grid sampling program and the analytical parameters analyzed.

4.03.2 Grid Sampling Program

A total of 79 grid points were sampled at the BASF Kearny facility. These samples were collected from the 0-6" interval below pavement or concrete. A total of four samples were not collected due to inaccessibility.

The grid samples were analyzed for TPH and PP Metals (and BN+15 at a rate of 20%). When the results indicated TPH concentrations greater than 1,000 mg/kg, additional BN+15's would be analyzed as required by the NJDEPE in their December 5, 1990 conditional approval letter.

Analytical results for the 79 TPH samples submitted indicated concentrations ranging from 22.4 mg/kg to 18,600 mg/kg. Only 9 of the 79 samples analyzed for TPH indicated concentrations above the NJDEPE's NRDC soil cleanup criteria of

10,000 mg/kg. The BN+15 analytical results for the 60 samples which exceeded previous standards indicate the following constituents:

- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)flouranthene
- bis(2-chloroethyl)ether
- BIS
- Dibenzo(a,h) anthracene
- 3,3'-Dichlorobenzidine
- Indeno(1,2,3-c,d)pyrene
- N-Nitrosodi-n-propylamine
- Hexachlorobenzene

The PP Metals analytical results for 79 samples indicate that the following constituent exceeds the NJDEPE's NRDC soil cleanup criteria:

- Arsenic
- Thallium

The grid point analytical results compared to the current NJDEPE Soil Cleanup Criteria are presented in Table 4.03.2-1.

4.04 Ground Water Investigation

4.04.1 General

This section presents the activities conducted for the ground water investigation at the BASF facility in Kearny, New Jersey. The additional activities that have occurred at the BASF facility in evaluating the ground water are the installation of one monitoring well, a comparison of the Phase I ground water analytical data to the current NJDEPE Ground Water Quality Criteria, ongoing LNAPL Recovery Program, and Tidal Study. This presentation is divided into four sections, the first section is the presentation of the installation of monitoring well 19, the second section is the presentation of the Phase I and Phase II ground water analytical data to the current NJDEPE Ground Water Quality Criteria, the third section is a presentation of the ongoing LNAPL Recovery Program, and the fourth and final section is the Phase II tidal study conducted at the site.

4.04.2 Monitoring Well Installation

One monitoring well (MW-19) was installed as part of the Phase II investigation on May 26, 1993. The location of this monitoring well is adjacent to and downgradient of the Basacryl Sump Pit. The selection of this location was based upon the possibility of integrity breaches of the Basacryl Sump Pit. The boring log and well construction detail is provided as Attachment 3.

MW-19 was analyzed for VO+15, BNA+25, Pesticides, PCB, TPH, PP Metals, Chlorides, Sulfates, Phenolics, Ammonia, Cyanide, TDS, and Dissolved Lead.

4.04.3 Ground Water Analytical Data

Phase I

Ground water samples were collected from the on-site monitoring wells during January, April, and July 1991. Two comprehensive analytical ground water sampling events occurred in January and July, while the April sampling event consisted of NJPDES indicator parameters. The analyses conducted for the comprehensive sampling event consisted of VO+15, BNA+25, Pesticides, PCB, TPH, PP Metals, Chlorides, Sulfates, Phenolics, Ammonia, Cyanide, TDS, and Dissolved Lead.

The parameters identified for the NJPDES permit are BN+15, Metals (Lead & Sodium), Chlorides, Sulfates, pH, Ammonia, Cyanide, TDS, Dissolved Lead, and Total Xylene.

A summary of the analytical results for the three sampling episodes are provided below:

Volatile Organic Compounds

VO+15 analysis was performed on wells MW1, MW2, MW3, MW4, MW5, MW6, MW7, MW8, MW9, MW10, MW11, MW14, MW15, and MW17 for the January 1991 and July 1991 sampling events. No compounds were detected above laboratory reporting limits. However, NJDEPE PQLs and Class II A Ground Water Quality Criteria (NJDEPE Criteria) were revised after collection and analysis of these samples, resulting in the laboratory reporting limits for several compounds being above the NJDEPE Criteria. The results for these compounds are highlighted in Table 4.04.3-1.

Semivolatile Organic Compounds

MW1, MW2, MW3, MW4, MW5, MW6, MW7, MW8, MW9, MW10, MW11, MW14, MW15 and MW17 were analyzed for semivolatile organic compounds (SVOCs) during the January, 1991, April, 1991 and July, 1991. The parameter lists for these sampling events is provided below:

Sampling Event	SVOC Parameter List
January, 1991	BNA + 15 Pesticides PCBs
April, 1991	BN + 15
July, 1991	BNA + 15 Pesticides PCBs

Like the VO+15 results, some of the SVOCs had laboratory reporting limits above the NJDEPE Criteria. These SVOCs were as follows:

2,6 Dinitrophenol	Chlordane
Pentachlorophenol	4-4' DDT (January 1991 only)
1,2 Diphenylhydrazine	4-4' DDE (January 1991 only)
Aldrin	4-4' DDD (January 1991 only)
Alpha-BHC	Aroclors

For each of these compounds, the only instance of a sample exceeding the laboratory reporting limits was:

MW-8 - Aroclor 1242 - January, 1991

Analytical results showed that the following additional analytes exceeded NJDEPE Criteria:

Wells	Sampling Event	Parameter
MW2	January, 1991	Benzidine Hexachlorobutadiene
MW8, MW9, MW14	January, 1991	Benzidine bis(2-chloroethyl) ether bis(2-Ethylhexyl)phthalate
MW8, MW14	July, 1991	3,3' Dichlorobenzidine 2,4 Dinitrotoluene Hexachlorobutadiene Hexachlorocyclopentadiene N-Nitrosodimethylamine N-Nitrosodi-n-propylamine 1,2,4-Trichlorobenzene

None of the above "hits" exceeded laboratory reporting limits. These "hits" resulted from elevated laboratory detection limits due to dilution required by the sample matrix, and likely do not indicate actual concentrations of these analytes above NJDEPE Criteria. However, they do not conclusively indicate concentrations below the NJDEPE Criteria.

In summary, the only conclusive "hit" was for Arocolor 1242 in MW8 in January, 1991. However, this compound was below NJDEPE Criteria for the July, 1991 sampling event at MW8.

Groundwater Conventionals and Inorganics, Xylenes

Laboratory reporting limits for groundwater conventionals, inorganics and xylenes were below NJDEPE Criteria except in the case of antimony. No samples indicated concentrations in excess of the detection limit for antimony. Following is a summary of the exceedances of NJDEPE Criteria for groundwater conventionals, inorganics, and xylenes.

Wells	Sampling Event	Parameter
MW1, MW2, MW3, MW4, MW5, MW5, MW6, MW7, MW8, MW9, MW10, MW11, MW14, MW15	January, 1991	Ammonia Arsenic
MW1, MW2, MW3, MW4, MW5, MW6, MW7, MW8, MW9, MW10, MW11, MW14, MW15	April, 1991	Ammonia
MW1, MW2, MW3, MW4, MW5, MW6, MW7, MW8, MW9, MW10, MW11, MW14, MW15, MW17	July, 1991	Ammonia Arsenic
MW1, MW7, MW14, MW15	January, 1991	Lead, total
MW1, MW8, MW14,	April, 1991	Lead, total
MW8, MW14, MW17	July, 1991	Lead, total
MW8	July, 1991	Chromium
MW2, MW3, MW4, MW5, MW7, MW8, MW11, MW14, MW15	January, 1991	Total Dissolved Solids
MW2, MW3, MW4, MW5, MW7, MW8, MW9, MW11, MW14, MW15, MW17	April, 1991	Total Dissolved Solids

Wells	Sampling Event	Parameter
MW2, MW3, MW4, MW5, MW7, MW8, MW9, MW10, MW11, MW14, MW15, MW17	July, 1991	Total Dissolved Solids
MW5, MW8	January, 1991	Chloride
MW7, MW8	April, 1991	Chloride
MW7, MW8	July, 1991	Chloride
MW1, MW3, MW4, MW5, MW7, MW8, MW9, MW11, MW14, MW15, MW17	April, 1991	Sodium
MW3, MW4, MW5, MW6, MW8, MW9, MW10, MW11, MW14, MW15, MW17	July, 1991	Sodium
MW1, MW7, MW11, MW15	April, 1991	pH
MW7, MW11, MW15	July, 1991	pH
MW14	January, 1991	Lead, Dissolved
MW4, MW7, MW10, MW14	April, 1991	Lead, Dissolved
MW1, MW17	July, 1991	Lead, Dissolved

Petroleum hydrocarbons were shown to be present at elevated levels in MW12, MW13, and MW16.

Phase I groundwater analytical results for the monitoring wells sampled are presented in Table 4.04.3-1.

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - January, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW1RD1 910115 FB9712/9720	W MW2RD1 910115 FB9709/9717	W MW3RD1 910115 FB9710/9718	W MW-4 910117 FB9839/9847	W MW-5 910117 FB9838/9846	W MW6RD1 910115 FB9708/9716	W MW7RD1 910115 FB9713/9721	W MW-7 910117 FB9833	W MW8RD1 910115 FB9711/9719	W MW-9 910117 FB9837/9845
VOLATILE ORGANICS											
Acrolein	NA ug/l	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Acrylonitrile	50 ug/l	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Benzene	1 ug/l	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4
bis(Chloromethyl)ether	NA ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Bromoform	4 ug/l	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7
Carbon tetrachloride	2 ug/l	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8
Chlorobenzene	4 ug/l	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0
Chlorodibromomethane	10 ug/l	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1
Chloroethane	NA ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Chloroethylvinyl ether	NA ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Chloroform	6 ug/l	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Dichlorobromomethane	1 ug/l	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2
Dichlorodifluoromethane	NA ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1-Dichloroethane	70 ug/l	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7
1,2-Dichloroethane	2 ug/l	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8
1,1-Dichloroethylene	2 ug/l	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8
1,2-Dichloropropane	1 ug/l	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0
cis-1,3-Dichloropropylene	NA ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	700 ug/l	< 7.2	< 7.2	< 7.2	< 7.2	< 7.2	< 7.2	< 7.2	< 7.2	< 7.2	< 7.2
Methyl bromide	10 ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methyl chloride	30 ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Methylene chloride	2 ug/l	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8
1,1,2,2-Tetrachloroethane	2 ug/l	< 6.9	< 6.9	< 6.9	< 6.9	< 6.9	< 6.9	< 6.9	< 6.9	< 6.9	< 6.9
Tetrachloroethylene	1 ug/l	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1
Toluene	1000 ug/l	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0
1,2-Trans-dichloroethylene	100 ug/l	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
1,1,1-Trichloroethane	30 ug/l	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8
1,1,2-Trichloroethane	3 ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichloroethylene	1 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9
Trichlorofluoromethane	NA ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl chloride	5 ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,3-Dichloropropylene	NA ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
SEMI-VOLATILE ORG.											
2-Chlorophenol	40 ug/l	< 3.5	< 4.0	< 3.7	< 3.4	< 3.5	< 3.4	< 3.4	< 3.3	< 18	< 18
2,4-Dichlorophenol	20 ug/l	< 2.8	< 3.3	< 3.0	< 2.8	< 2.9	< 2.8	< 2.8	< 2.7	< 14	< 15
2,4-Dimethylphenol	100 ug/l	< 2.8	< 3.3	< 3.0	< 2.8	< 2.9	< 2.8	< 2.8	< 2.7	< 14	< 15

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

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Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - January, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW1RD1 910115 FB9712/9720	W MW2RD1 910115 FB9709/9717	W MW3RD1 910115 FB9710/9718	W MW-4 910117 FB9839/9847	W MW-5 910117 FB9838/9846	W MW6RD1 910115 FB9708/9716	W MW7RD1 910115 FB9713/9721	W MW-7 910117 FB9833	W MW8RD1 910115 FB9711/9719	W MW-9 910117 FB9837/9845
4,6-Dinitro-o-cresol	NA ug/l	< 25	< 29	< 27	< 25	< 26	< 25	< 25	< 24	< 130	< 130
2,4-Dinitrophenol	40 ug/l	< 44	< 53	< 47	< 43	< 43	< 44	< 44	< 42	< 200	< 200
2-Nitrophenol	NA ug/l	< 3.8	< 4.4	< 4.0	< 3.7	< 3.8	< 3.8	< 3.8	< 3.6	< 19	< 19
4-Nitrophenol	NA ug/l	< 2.5	< 2.9	< 2.7	< 2.5	< 2.6	< 2.5	< 2.5	< 2.4	< 13	< 13
p-Chloro-m-cresol	NA ug/l	< 3.2	< 3.7	< 3.3	< 3.1	< 3.2	< 3.1	< 3.1	< 3.0	< 16	< 16
Pentachlorophenol	1 ug/l	< 3.8	< 4.4	< 4.0	< 3.7	< 3.8	< 3.8	< 3.8	< 3.8	< 19	< 19
Phenol	4000 ug/l	< 1.6	< 1.8	< 1.7	< 1.5	< 1.6	< 1.6	< 1.6	< 1.5	< 8.0	< 8.1
2,4,6-Trichlorophenol	NA ug/l	< 2.8	< 3.3	< 3.0	< 2.8	< 2.9	< 2.8	< 2.8	< 2.7	< 14	< 15
Acenaphthene	400 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	27.4	< 1.9	15.6	< 10
Acenaphthylene	NA ug/l	< 3.7	< 4.3	< 3.9	< 3.6	< 3.7	< 3.6	< 3.6	< 3.5	< 19	< 19
Anthracene	2000 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
Benzidine	50 ug/l	< 46	< 54	< 49	< 45	< 47	< 46	< 46	< 44	< 230	< 240
Benzo(a)anthracene	NA ug/l	< 8.2	< 9.5	< 8.7	< 8.0	< 8.3	< 8.1	< 8.1	< 7.9	< 41	< 42
Benzo(a)pyrene	NA ug/l	< 2.6	< 3.0	< 2.8	< 2.6	< 2.7	< 2.6	< 2.6	< 2.5	< 13	< 13
Benzo(b)fluoranthene	NA ug/l	< 5.1	< 5.9	< 5.3	< 4.9	< 5.1	< 5.0	< 5.0	< 4.8	< 26	< 26
Benzo(ghi)perylene	NA ug/l	< 4.3	< 5.0	< 4.6	< 4.2	< 4.4	< 4.3	< 4.3	< 4.1	< 22	< 22
Benzo(k)fluoranthene	NA ug/l	< 2.6	< 3.0	< 2.8	< 2.6	< 2.7	< 2.6	< 2.6	< 2.5	< 13	< 13
bis(2-Chloroethoxy)methane	NA ug/l	< 5.6	< 6.5	< 5.9	< 5.5	< 5.6	< 5.5	< 5.5	< 5.4	< 28	< 28
bis(2-Chloroethyl) ether	10 ug/l	< 6.0	< 7.0	< 6.3	< 5.9	< 6.1	< 5.9	< 5.9	< 5.8	< 30	< 31
bis(2-Chloroisopropyl)ether	300 ug/l	< 6.0	< 7.0	< 6.3	< 5.9	< 6.1	< 5.9	< 5.9	< 5.8	< 30	< 31
bis(2-Ethylhexyl)phthalate	30 ug/l	< 11	< 12	< 11	< 10	10.9	< 10	< 10	< 10	< 33	< 34
4-Bromophenyl phenyl ether	NA ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
Butyl benzyl phthalate	100 ug/l	< 11	< 12	< 11	< 10	< 11	< 10	< 10	< 10	< 53	< 54
2-Chloronaphthalene	NA ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
4-Chlorophenyl phenyl ether	NA ug/l	< 4.4	< 5.1	< 4.7	< 4.3	< 4.5	< 4.4	< 4.4	< 4.2	< 22	< 23
Chrysene	NA ug/l	< 2.6	< 3.0	< 2.8	< 2.6	< 2.7	< 2.6	< 2.6	< 2.5	< 13	< 13
Dibenzo(a,h)anthracene	NA ug/l	< 2.6	< 3.0	< 2.8	< 2.6	< 2.7	< 2.6	< 2.6	< 2.5	< 13	< 13
1,2-Dichlorobenzene	600 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
1,3-Dichlorobenzene	600 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
1,4-Dichlorobenzene	75 ug/l	< 4.6	< 5.4	< 4.9	< 4.5	< 4.7	< 4.6	< 4.6	< 4.4	< 23	< 24
3,3'-Dichlorobenzidine	60 ug/l	< 17.4	< 20.1	< 18.3	< 17.0	< 17.6	< 17.2	< 17.2	< 16.7	< 87.8	< 88.7
Diethyl phthalate	5000 ug/l	< 11	< 12	< 11	< 10	< 11	< 10	< 10	< 10	< 53	< 54
Dimethyl phthalate	NA ug/l	< 11	< 12	< 11	< 10	< 11	< 10	< 10	< 10	< 53	< 54
Di-n-butyl phthalate	NA ug/l	< 11	< 12	< 11	< 10	< 11	< 10	< 10	< 10	< 53	< 54
2,4-Dinitrotoluene	10 ug/l	< 6.0	< 7.0	< 6.3	< 5.9	< 6.1	< 5.9	< 5.9	< 5.8	< 30	< 31
2,6-Dinitrotoluene	NA ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
Di-n-octyl phthalate	100 ug/l	< 11	< 12	< 11	< 10	< 11	< 10	< 10	< 10	< 53	< 54

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "--" symbol indicates that analysis was not performed for a given analyte.

843890212

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - January, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW1RD1 910115 FB9712/9720	W MW2RD1 910115 FB9709/9717	W MW3RD1 910115 FB9710/9718	W MW-4 910117 FB9839/9847	W MW-5 910117 FB9838/9846	W MW6RD1 910115 FB9708/9716	W MW7RD1 910115 FB9713/9721	W MW-7 910117 FB9833	W MW8RD1 910115 FB9711/9719	W MW-9 910117 FB9837/9845
1,2-Diphenylhydrazine	0.04 ug/l	< .11	< .12	< .11	< .10	< .11	< .10	< .10	< .10	< .10	< .10
Fluoranthene	300 ug/l	< 2.3	< 2.7	< 2.4	< 2.3	< 2.3	< 2.3	< 2.3	< 2.2	< 12	< 12
Fluorene	300 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	2.98	< 1.9	< 10	< 10
Hexachlorobenzene	10 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
Hexachlorobutadiene	1 ug/l	< .95	< 1.1	< 1.0	< .93	< .96	< .94	< .94	< .91	< 4.1	< 4.1
Hexachlorocyclopentadiene	50 ug/l	< 11	< 12	< 11	< 10	< 11	< 10	< 10	< 10	< 13	< 13
Hexachloroethane	10 ug/l	< 1.7	< 2.0	< 1.8	< 1.6	< 1.7	< 1.7	< 1.7	< 1.6	< 8.5	< 8.6
Indeno(1,2,3-c,d)pyrene	NA ug/l	< 3.9	< 4.5	< 4.1	< 3.8	< 3.9	< 3.9	< 3.9	< 3.7	< 20	< 20
Isophorone	100 ug/l	< 2.3	< 2.7	< 2.4	< 2.3	< 2.3	< 2.3	< 2.3	< 2.2	< 12	< 12
Naphthalene	NA ug/l	< 1.7	< 2.0	< 1.8	< 1.6	< 1.7	< 1.7	456	< 1.6	< 8.5	< 8.6
Nitrobenzene	10 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
N-Nitrosodimethylamine	20 ug/l	< 11	< 12	< 11	< 10	< 11	< 10	< 10	< 10	< 33	< 34
N-Nitrosodi-n-propylamine	20 ug/l	< 11	< 12	< 11	< 10	< 11	< 10	< 10	< 10	< 33	< 34
N-Nitrosodiphenylamine	20 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
Phenanthrene	NA ug/l	< 5.7	< 6.6	< 6.0	< 5.6	< 5.7	< 5.6	< 5.6	< 5.5	< 29	< 29
Pyrene	200 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	11.1	< 10
1,2,4-Trichlorobenzene	9 ug/l	< 2.0	< 2.3	< 2.1	< 2.0	< 2.0	< 2.0	< 2.0	< 1.9	< 10	< 10
Aldrin	0.04 ug/l	< .054	< .055	< .056	< .055	< .056	< .054	< .067	< .056	< .054	< .052
Alpha-BHC	0.02 ug/l	< .054	< .055	< .056	< .055	< .056	< .054	< .067	< .056	< .054	< .052
Beta-BHC	0.2 ug/l	< .054	< .055	< .056	< .055	< .056	< .054	< .067	< .056	< .054	< .052
Gamma-BHC	0.2 ug/l	< .054	< .055	< .056	< .055	< .056	< .054	< .067	< .056	< .054	< .052
Delta-BHC	NA ug/l	< .054	< .055	< .056	< .055	< .056	< .054	< .067	< .056	< .054	< .052
Chlordane	0.5 ug/l	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.3	< 1.1	< 1.1	< 1.0
4,4'-DDT	0.1 ug/l	< .11	< .11	< .11	< .11	< .11	< .11	< .13	< .11	< .11	< .10
4,4'-DDE	0.1 ug/l	< .11	< .11	< .11	< .11	< .11	< .11	< .13	< .11	< .11	< .10
4,4'-DDD	0.1 ug/l	< .11	< .11	< .11	< .11	< .11	< .11	< .13	< .11	< .11	< .10
Dieldrin	0.03 ug/l	< .11	< .11	< .11	< .11	< .11	< .11	< .13	< .11	< .11	< .10
Endosulfan I	0.4 ug/l	< .054	< .055	< .056	< .055	< .056	< .054	< .067	< .056	< .054	< .052
Endosulfan II	0.4 ug/l	< .11	< .11	< .11	< .11	< .11	< .11	< .13	< .11	< .11	< .10
Endosulfan sulfate	0.4 ug/l	< .11	< .11	< .11	< .11	< .11	< .11	< .13	< .11	< .11	< .10
Endrin	2 ug/l	< .11	< .11	< .11	< .11	< .11	< .11	< .13	< .11	< .11	< .10
Endrin aldehyde	NA ug/l	< .11	< .11	< .11	< .11	< .11	< .11	< .13	< .11	< .11	< .10
Heptachlor	0.4 ug/l	< .054	< .055	< .056	< .055	< .056	< .054	< .067	< .056	< .054	< .052
Heptachlor epoxide	0.2 ug/l	< .054	< .055	< .056	< .055	< .056	< .054	< .067	< .056	< .054	< .052
Toxaphene	3 ug/l	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.7	< 2.2	< 2.2	< 2.1

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890213

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - January, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW1RD1 910115 FB9712/9720	W MW2RD1 910115 FB9709/9717	W MW3RD1 910115 FB9710/9718	W MW-4 910117 FB9839/9847	W MW-5 910117 FB9838/9846	W MW6RD1 910115 FB9708/9716	W MW7RD1 910115 FB9713/9721	W MW-7 910117 FB9833	W MW8RD1 910115 FB9711/9719	W MW-9 910117 FB9837/9845
Aroclor 1242	0.5 ug/l	< .54	< .55	< .56	< .55	< .56	< .54	< .67	< .56	< .39	< .32
Aroclor 1254	0.5 ug/l	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.3	< 1.1	< 1.1	< 1.0
Aroclor 1260	0.5 ug/l	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.3	< 1.1	< 1.1	< 1.0
Aroclor 1248	0.5 ug/l	< .54	< .55	< .56	< .55	< .56	< .54	< .67	< .54	< .54	< .52
Aroclor 1232	0.5 ug/l	< .54	< .55	< .56	< .55	< .56	< .54	< .67	< .56	< .54	< .52
Aroclor 1221	0.5 ug/l	< .54	< .55	< .56	< .55	< .56	< .54	< .67	< .56	< .54	< .52
Aroclor 1016	0.5 ug/l	< .54	< .55	< .56	< .55	< .56	< .54	< .67	< .56	< .54	< .52
Groundwater Conventionals											
Chloride	250 mg/l	77.5	77.4	220	103	258	45.3	244	85.6	460	21
Sulfate as SO4	250 mg/l	< 5.0	55.3	41.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	46.7
Phenolics, Total	NA mg/l	< .050	< .050	< .050	< .050	< .050	< .050	< .050	< .050	< .050	< .050
Cyanide, Total	0.2 mg/l	< .025	-	< .025	-	-	< .025	< .025	-	< .025	-
pH	6.5-8.5 std	7.68	7.5	7.8	7.65	8.23	7.14	7.42	7.25	7.74	8.06
pH	6.5-8.5 std	7.69	7.51	7.81	7.66	8.24	7.15	7.43	7.26	7.75	8.07
INORGANICS, XYLEMES											
Ammonia as N	0.5 mg/l	1	2.9	2.9	17	11	5.4	11	2.2	11	0.66
Antimony, Total	20 ug/l	< .60	< .60	< .60	< .60	< .60	< .60	< .60	< .60	< .60	< .60
Arsenic, Total	8 ug/l	690	13	< 10	22	< 10	< 10	32	< 10	< 20	< 10
Beryllium, Total	20 ug/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium, Total	4 ug/l	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Chromium, Total	100 ug/l	< 10	< 10	< 10	16	< 10	13	< 10	< 10	62	< 10
Copper, Total	1000 ug/l	23	< 10	< 10	110	< 10	< 10	< 10	< 10	< 10	11
Lead, Total	10 ug/l	42	< 5.0	< 5.0	5.6	< 5.0	< 5.0	8	11	< 5.0	7
Lead, Dissolved	10 ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-	6.4	< 5.0
Mercury, Total	2 ug/l	< .20	< .20	< .20	< .20	< .20	< .20	< .20	< .20	0.24	< .20
Nickel, Total	100 ug/l	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Petroleum Hydrocarbons (IR)	none visible mg/l	< 1.0	< 1.1	< 1.1	< 1.0	1.3	< 1.1	2.1	< 1.0	< 1.1	< 1.0
Petroleum Hydrocarbons(heavy)	none visible mg/l	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons(light)	none visible mg/l	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons(medium)	none visible mg/l	-	-	-	-	-	-	-	-	-	-
Selenium, Total	50 ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Silver, Total	NA ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Sodium, Dissolved	50000 ug/l	-	-	-	-	-	-	-	-	-	-
Thallium, Total	10 ug/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total Dissolved Solids (TDS)	500 mg/l	260	850	870	1050	380	740	410	1430	390	
Zinc, Total	5000 ug/l	74	25	< 20	82	< 20	< 20	< 20	28	< 20	24
m-Xylene	NA ug/l	-	-	-	-	-	-	-	-	-	-
o+p-Xylenes	NA ug/l	-	-	-	-	-	-	-	-	-	-

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890214

Table 4.04.3-1

BASF Corporation: Kearny, New Jersey

ECRA Case #90537

Monitoring Well Data - January, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-10 910117 FB9836/9844	W MW-11 910117 FB9835/9843	W MW-14 910117 FB9834/9842	W MW15RD1 910115 FB9707/9715	W MW-17 910117 FB9841					
VOLATILE ORGANICS											
Acrolein	NA ug/l	< 100	< 100	< 100	< 100	< 100	-				
Acrylonitrile	50 ug/l	< 100	< 100	< 100	< 100	< 100	-				
Benzene	1 ug/l	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	-				
bis(Chloromethyl)ether	NA ug/l	< 10	< 10	< 10	< 10	< 10	-				
Bromoform	4 ug/l	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	-				
Carbon tetrachloride	2 ug/l	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	-				
Chlorobenzene	4 ug/l	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	-				
Chlorodibromomethane	10 ug/l	< 3.1	< 3.1	< 3.1	< 3.1	< 3.1	-				
Chloroethane	NA ug/l	< 10	< 10	< 10	< 10	< 10	-				
2-Chloroethylvinyl ether	NA ug/l	< 10	< 10	< 10	< 10	< 10	-				
Chloroform	6 ug/l	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	-				
Dichlorobromomethane	1 ug/l	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	-				
Dichlorodifluoromethane	NA ug/l	< 10	< 10	< 10	< 10	< 10	-				
1,1-Dichloroethane	70 ug/l	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	-				
1,2-Dichloroethane	2 ug/l	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	-				
1,1-Dichloroethylene	2 ug/l	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	-				
1,2-Dichloropropane	1 ug/l	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	-				
cis-1,3-Dichloropropylene	NA ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-				
Ethylbenzene	700 ug/l	< 7.2	< 7.2	< 7.2	< 7.2	< 7.2	-				
Methyl bromide	10 ug/l	< 10	< 10	< 10	< 10	< 10	-				
Methyl chloride	30 ug/l	< 10	< 10	< 10	< 10	< 10	-				
Methylene chloride	2 ug/l	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8	-				
1,1,2,2-Tetrachloroethane	2 ug/l	< 6.9	< 6.9	< 6.9	< 6.9	< 6.9	-				
Tetrachloroethylene	1 ug/l	< 4.1	< 4.1	< 4.1	< 4.1	< 4.1	-				
Toluene	1000 ug/l	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	-				
1,2-Trans-dichloroethylene	100 ug/l	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	-				
1,1,1-Trichloroethane	30 ug/l	< 3.8	< 3.8	< 3.8	< 3.8	< 3.8	-				
1,1,2-Trichloroethane	3 ug/l	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-				
Trichloroethylene	1 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	-				
Trichlorofluoromethane	NA ug/l	< 10	< 10	< 10	< 10	< 10	-				
Vinyl chloride	5 ug/l	< 10	< 10	< 10	< 10	< 10	-				
trans-1,3-Dichloropropylene	NA ug/l	< 10	< 10	< 10	< 10	< 10	-				
SEMI-VOLATILE ORG.											
2-Chlorophenol	40 ug/l	< 3.4	< 3.5	< 18	< 3.8	< 3.8	-				
2,4-Dichlorophenol	20 ug/l	< 2.8	< 2.9	< 15	< 3.1	< 3.1	-				
2,4-Dimethylphenol	100 ug/l	< 2.8	< 2.9	< 15	< 3.1	< 3.1	-				

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890215

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - January, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-10 910117 FB9836/9844	W MW-11 910117 FB9835/9843	W MW-14 910117 FB9834/9842	W MW15RD1 910115 FB9707/9715	W MW-17 910117 FB9841						
4,6-Dinitro-o-cresol	NA ug/l	< 24	< 26	< 130	< 28	-						
2,4-Dinitrophenol	40 ug/l	< 33	< 44	< 230	< 48	-						
2-Nitrophenol	NA ug/l	< 3.7	< 3.9	< 20	< 4.1	-						
4-Nitrophenol	NA ug/l	< 2.4	< 2.6	< 13	< 2.8	-						
p-Chloro-m-cresol	NA ug/l	< 3.1	< 3.2	< 16	< 3.4	-						
Pentachlorophenol	1 ug/l	< 3.7	< 3.9	< 41	< 4.1	-						
Phenol	4000 ug/l	< 1.5	< 1.6	< 8.2	< 1.7	-						
2,4,6-Trichlorophenol	NA ug/l	< 2.8	< 2.9	< 15	< 3.1	-						
Acenaphthene	400 ug/l	< 1.9	9.32	< 10	32	-						
Acenaphthylene	NA ug/l	< 3.6	< 3.8	< 19	< 4.0	-						
Anthracene	2000 ug/l	< 1.9	< 2.0	< 10	< 2.2	-						
Benzidine	50 ug/l	< 45	< 47	< 246	< 51	-						
Benzo(a)anthracene	NA ug/l	< 8.0	< 8.4	< 43	< 9.0	-						
Benzo(a)pyrene	NA ug/l	< 2.6	< 2.7	< 14	< 2.9	-						
Benzo(b)fluoranthene	NA ug/l	< 4.9	< 5.2	< 26	< 5.5	-						
Benzo(ghi)perylene	NA ug/l	< 4.2	< 4.4	< 23	< 4.7	-						
Benzo(k)fluoranthene	NA ug/l	< 2.6	< 2.7	< 14	< 2.9	-						
bis(2-Chloroethoxy)methane	NA ug/l	< 5.4	< 5.7	< 29	< 6.1	-						
bis(2-Chloroethyl) ether	10 ug/l	< 5.8	< 6.1	< 31	< 6.6	-						
bis(2-Chloroisopropyl)ether	300 ug/l	< 5.8	< 6.1	< 31	< 6.6	-						
bis(2-Ethylhexyl)phthalate	30 ug/l	< 10	< 11	< 55	16.8	-						
4-Bromophenyl phenyl ether	NA ug/l	< 1.9	< 2.0	< 10	< 2.2	-						
Butyl benzyl phthalate	100 ug/l	< 10	< 11	< 55	< 11	-						
2-Chloronaphthalene	NA ug/l	< 1.9	< 2.0	< 10	< 2.2	-						
4-Chlorophenyl phenyl ether	NA ug/l	< 4.3	< 4.5	< 23	< 4.8	-						
Chrysene	NA ug/l	< 2.6	< 2.7	< 14	< 2.9	-						
Dibenzo(a,h)anthracene	NA ug/l	< 2.6	< 2.7	< 14	< 2.9	-						
1,2-Dichlorobenzene	600 ug/l	< 1.9	< 2.0	< 10	< 2.2	-						
1,3-Dichlorobenzene	600 ug/l	< 1.9	< 2.0	< 10	< 2.2	-						
1,4-Dichlorobenzene	75 ug/l	< 4.5	< 4.7	< 24	< 5.1	-						
3,3'-Dichlorobenzidine	60 ug/l	< 16.8	< 17.7	< 90*	< 19.0	-						
Diethyl phthalate	5000 ug/l	< 10	< 11	< 55	< 11	-						
Dimethyl phthalate	NA ug/l	< 10	< 11	< 55	< 11	-						
Di-n-butyl phthalate	NA ug/l	< 10	< 11	< 55	< 11	-						
2,4-Dinitrotoluene	10 ug/l	< 5.8	< 6.1	< 31	< 6.6	-						
2,6-Dinitrotoluene	NA ug/l	< 1.9	< 2.0	< 10	< 2.2	-						
Di-n-octyl phthalate	100 ug/l	< 10	< 11	< 55	< 11	-						

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890216

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - January, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-10 910117 FB9836/9844	W MW-11 910117 FB9835/9843	W MW-14 910117 FB9834/9842	W MW15RD1 910115 FB9707/9715	W MW-17 910117 FB9841					
1,2-Diphenylhydrazine	0.04 ug/l	< .10	< .11	< .55	< .11	-					
Fluoranthene	300 ug/l	< 2.2	3.71	< 12	< 2.5	-					
Fluorene	300 ug/l	< 1.9	5.98	< 10	16.4	-					
Hexachlorobenzene	10 ug/l	< 1.9	< 2.0	< 10	< 2.2	-					
Hexachlorobutadiene	1 ug/l	< .92	< .97	< .43	< 1.0	-					
Hexachlorocyclopentadiene	50 ug/l	< 10	< 11	< .55	< 11	-					
Hexachloroethane	10 ug/l	< 1.6	< 1.7	< 8.8	< 1.8	-					
Indeno(1,2,3-c,d)pyrene	NA ug/l	< 3.8	< 4.0	< 20	< 4.3	-					
Isophorone	100 ug/l	< 2.2	< 2.4	< 12	< 2.5	-					
Naphthalene	NA ug/l	< 1.6	< 1.7	< 8.8	3.08	-					
Nitrobenzene	10 ug/l	< 1.9	< 2.0	< 10	< 2.2	-					
N-Nitrosodimethylamine	20 ug/l	< 10	< 11	< .55	< 11	-					
N-Nitrosodi-n-propylamine	20 ug/l	< 10	< 11	< .55	< 11	-					
N-Nitrosodiphenylamine	20 ug/l	< 1.9	< 2.0	< 10	< 2.2	-					
Phenanthrene	NA ug/l	< 5.5	< 5.8	< 30	6.56	-					
Pyrene	200 ug/l	< 1.9	3.27	< 10	< 2.2	-					
1,2,4-Trichlorobenzene	9 ug/l	< 1.9	< 2.0	< .10	< 2.2	-					
Aldrin	0.04 ug/l	< .051	< .054	< .057	< .057	-					
Alpha-BHC	0.02 ug/l	< .051	< .054	< .057	< .057	-					
Beta-BHC	0.2 ug/l	< .051	< .054	< .057	< .057	-					
Gamma-BHC	0.2 ug/l	< .051	< .054	< .057	< .057	-					
Delta-BHC	NA ug/l	< .051	< .054	< .057	< .057	-					
Chlordane	0.5 ug/l	< 1.0	< 1.1	< 1.1	< 1.1	-					
4,4'-DDT	0.1 ug/l	< .10	< .11	< .11	< .11	-					
4,4'-DDE	0.1 ug/l	< .10	< .11	< .11	< .11	-					
4,4'-DDD	0.1 ug/l	< .10	< .11	< .11	< .11	-					
Dieldrin	0.03 ug/l	< .10	< .11	< .11	< .11	-					
Endosulfan I	0.4 ug/l	< .051	< .054	< .057	< .057	-					
Endosulfan II	0.4 ug/l	< .10	< .11	< .11	< .11	-					
Endosulfan sulfate	0.4 ug/l	< .10	< .11	< .11	< .11	-					
Endrin	2 ug/l	< .10	< .11	< .11	< .11	-					
Endrin aldehyde	NA ug/l	< .10	< .11	< .11	< .11	-					
Heptachlor	0.4 ug/l	< .051	< .054	< .057	< .057	-					
Heptachlor epoxide	0.2 ug/l	< .051	< .054	< .057	< .057	-					
Toxaphene	3 ug/l	< 2.0	< 2.2	< 2.3	< 2.3	-					

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
The "—" symbol indicates that analysis was not performed for a given analyte.

843890217

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - January, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-10 910117 FB9836/9844	W MW-11 910117 FB9835/9843	W MW-14 910117 FB9834/9842	W MW15RD1 910115 FB9707/9715	W MW-17 910117 FB9841					
Aroclor 1242	0.5 ug/l	< .51	< .54	< .57	< .57	-					
Aroclor 1254	0.5 ug/l	< 1.0	< 1.1	< 1.1	< 1.1	-					
Aroclor 1260	0.5 ug/l	< 1.0	< 1.1	< 1.1	< 1.1	-					
Aroclor 1248	0.5 ug/l	< .51	< .54	< .57	< .57	-					
Aroclor 1232	0.5 ug/l	< .51	< .54	< .57	< .57	-					
Aroclor 1221	0.5 ug/l	< .51	< .54	< .57	< .57	-					
Aroclor 1016	0.5 ug/l	< .51	< .54	< .57	< .57	-					
Groundwater Conventionals											
Chloride	250 mg/l	20.4	232	97.8	31.7	-					
Sulfate as SO4	250 mg/l	7.9	< 5.0	10	< 5.0	-					
Phenolics, Total	NA mg/l	< .050	< .050	< .050	< .050	-					
Cyanide, Total	0.2 mg/l	-	-	-	< .025	-					
pH	6.5-8.5 std	7.78	7.31	8.55	7.09	-					
pH	6.5-8.5 std	7.79	7.32	8.56	7.09	-					
INORGANICS, XYLEMES											
Ammonia as N	0.5 mg/l	0.69	3	3.6	51	-					
Antimony, Total	20 ug/l	< .60	< .60	< .60	< .60	-					
Arsenic, Total	8 ug/l	< 10	17	< 10	16	-					
Beryllium, Total	20 ug/l	< 1.0	< 1.0	< 1.0	< 1.0	-					
Cadmium, Total	4 ug/l	< 2.0	< 2.0	< 2.0	< 2.0	-					
Chromium, Total	100 ug/l	< 10	< 10	30	86	-					
Copper, Total	1000 ug/l	< 10	< 10	< 10	32	-					
Lead, Total	10 ug/l	< 5.0	< 5.0	15	39	-					
Lead, Dissolved	10 ug/l	< 5.0	< 5.0	29	< 5.0	< 5.0					
Mercury, Total	2 ug/l	< .20	< .20	0.31	0.63	-					
Nickel, Total	100 ug/l	< 20	< 20	< 20	< 20	-					
Petroleum Hydrocarbons (IR)	none visible mg/l	< 1.0	2.6	< 1.1	< 1.1	-					
Petroleum Hydrocarbons(heavy)	none visible mg/l	-	-	-	-	-					
Petroleum Hydrocarbons(light)	none visible mg/l	-	-	-	-	-					
Petroleum Hydrocarbons(medium)	none visible mg/l	-	-	-	-	-					
Selenium, Total	50 ug/l	< 5.0	< 5.0	< 5.0	< 5.0	-					
Silver, Total	NA ug/l	< 10	< 10	< 10	< 10	< 10	-				
Sodium, Dissolved	50000 ug/l	-	-	-	-	-					
Thallium, Total	10 ug/l	< 10	< 10	< 10	< 10	-					
Total Dissolved Solids (TDS)	500 mg/l	300	620	940	580	-					
Zinc, Total	5000 ug/l	< 20	< 20	28	84	-					
m-Xylene	NA ug/l	-	-	-	-	-					
o+p-Xylenes	NA ug/l	-	-	-	-	-					

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "--" symbol indicates that analysis was not performed for a given analyte.

843890218

Table 4.04.3-1

BASF Corporation: Kearny, New Jersey

ECRA Case #90537

Monitoring Well Data - April, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-01 910423 FC3463/3484	W MW-02 910423 FC3452/3473	W MW-03 910423 FC3455/3476	W MW-04 910423 FC3460/3481	W MW-05 910423 FC3451/3477	W MW-06 910423 FC3456/3477	W MW-07 910424 FC3462/3483	W MW-08 910423 FC3459/3480	W MW-09 910423 FC3457/3478	W MW-10 910423 FC3461/3482
VOLATILE ORGANICS											
Acrolein	NA ug/l	-	-	-	-	-	-	-	-	-	-
Acrylonitrile	50 ug/l	-	-	-	-	-	-	-	-	-	-
Benzene	1 ug/l	-	-	-	-	-	-	-	-	-	-
bis(Chloromethyl)ether	NA ug/l	-	-	-	-	-	-	-	-	-	-
Bromoform	4 ug/l	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	2 ug/l	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	4 ug/l	-	-	-	-	-	-	-	-	-	-
Chlorodibromomethane	10 ug/l	-	-	-	-	-	-	-	-	-	-
Chloroethane	NA ug/l	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinyl ether	NA ug/l	-	-	-	-	-	-	-	-	-	-
Chloroform	6 ug/l	-	-	-	-	-	-	-	-	-	-
Dichlorobromomethane	1 ug/l	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NA ug/l	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	70 ug/l	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	2 ug/l	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	2 ug/l	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1 ug/l	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropylene	NA ug/l	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700 ug/l	-	-	-	-	-	-	-	-	-	-
Methyl bromide	10 ug/l	-	-	-	-	-	-	-	-	-	-
Methyl chloride	30 ug/l	-	-	-	-	-	-	-	-	-	-
Methylene chloride	2 ug/l	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	2 ug/l	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	1 ug/l	-	-	-	-	-	-	-	-	-	-
Toluene	1000 ug/l	-	-	-	-	-	-	-	-	-	-
1,2-Trans-dichloroethylene	100 ug/l	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	30 ug/l	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	3 ug/l	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	1 ug/l	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	NA ug/l	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	5 ug/l	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropylene	NA ug/l	-	-	-	-	-	-	-	-	-	-
SEMI-VOLATILE ORG.											
2-Chlorophenol	40 ug/l	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	20 ug/l	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	100 ug/l	-	-	-	-	-	-	-	-	-	-

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "--" symbol indicates that analysis was not performed for a given analyte.

843890219

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - April, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-01 910423 FC3463/3484	W MW-02 910423 FC3452/3473	W MW-03 910423 FC3455/3476	W MW-04 910423 FC3460/3481	W MW-05 910423 FC3451/3472	W MW-06 910423 FC3456/3477	W MW-07 910424 FC3462/3483	W MW-08 910423 FC3459/3480	W MW-09 910423 FC3457/3478	W MW-10 910423 FC3461/3482
4,6-Dinitro-o-cresol	NA ug/l	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	40 ug/l	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	NA ug/l	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	NA ug/l	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol	NA ug/l	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	1 ug/l	-	-	-	-	-	-	-	-	-	-
Phenol	4000 ug/l	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	NA ug/l	-	-	-	-	-	-	-	-	-	-
Acenaphthene	400 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	11	7.74	< 1.9	< 1.9
Acenaphthylene	NA ug/l	< 3.5	< 3.5	< 3.5	< 3.5	< 3.7	< 3.5	< 3.7	< 3.8	< 3.5	< 3.5
Anthracene	2000 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
Benzidine	50 ug/l	< 44	< 44	< 44	< 44	< 47	< 44	< 47	< 48	< 44	< 44
Benzo(a)anthracene	NA ug/l	< 7.9	< 7.9	< 7.8	< 7.9	< 8.3	< 7.9	< 8.3	< 8.6	< 7.8	< 7.8
Benzo(a)pyrene	NA ug/l	< 2.5	< 2.5	< 2.5	< 2.5	< 2.7	< 2.5	< 2.7	< 2.7	< 2.5	< 2.5
Benzo(b)fluoranthene	NA ug/l	< 4.8	< 4.8	< 4.8	< 4.8	< 5.1	< 4.8	< 5.1	< 5.3	< 4.8	< 4.8
Benzo(ghi)perylene	NA ug/l	< 4.1	< 4.1	< 4.1	< 4.1	< 4.4	< 4.1	< 4.4	< 4.5	< 4.1	< 4.1
Benzo(k)fluoranthene	NA ug/l	< 2.5	< 2.5	< 2.5	< 2.5	< 2.7	< 2.5	< 2.7	< 2.7	< 2.5	< 2.5
bis(2-Chloroethoxy)methane	NA ug/l	< 5.4	< 5.4	< 5.3	< 5.4	< 5.6	< 5.4	< 5.6	< 5.8	< 5.3	< 5.3
bis(2-Chloroethyl) ether	10 ug/l	< 5.8	< 5.8	< 5.7	< 5.8	< 6.1	< 5.8	< 6.1	< 6.3	< 5.7	< 5.7
bis(2-Chloroisopropyl)ether	300 ug/l	< 5.8	< 5.8	< 5.7	< 5.8	< 6.1	< 5.8	< 6.1	< 6.3	< 5.7	< 5.7
bis(2-Ethylhexyl)phthalate	30 ug/l	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 11	< 10	< 10
4-Bromophenyl phenyl ether	NA ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
Butyl benzyl phthalate	100 ug/l	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 11	< 10	< 10
2-Chloronaphthalene	NA ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
4-Chlorophenyl phenyl ether	NA ug/l	< 4.2	< 4.2	< 4.2	< 4.2	< 4.5	< 4.2	< 4.5	< 4.6	< 4.2	< 4.2
Chrysene	NA ug/l	< 2.5	< 2.5	< 2.5	< 2.5	< 2.7	< 2.5	< 2.7	< 2.7	< 2.5	< 2.5
Dibenzo(a,h)anthracene	NA ug/l	< 2.5	< 2.5	< 2.5	< 2.5	< 2.7	< 2.5	< 2.7	< 2.7	< 2.5	< 2.5
1,2-Dichlorobenzene	600 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
1,3-Dichlorobenzene	600 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
1,4-Dichlorobenzene	75 ug/l	< 4.4	< 4.4	< 4.4	< 4.4	< 4.7	< 4.4	< 4.7	< 4.8	< 4.4	< 4.4
3,3'-Dichlorobenzidine	60 ug/l	< 16.7	< 16.7	< 16.5	< 16.7	< 17.6	< 16.7	< 17.6	< 18.1	< 16.5	< 16.5
Diethyl phthalate	5000 ug/l	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 11	< 10	< 10
Dimethyl phthalate	NA ug/l	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 11	< 10	< 10
Di-n-butyl phthalate	NA ug/l	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 11	< 10	< 10
2,4-Dinitrotoluene	10 ug/l	< 5.8	< 5.8	< 5.7	< 5.8	< 6.1	< 5.8	< 6.1	< 6.3	< 5.7	< 5.7
2,6-Dinitrotoluene	NA ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
Di-n-octyl phthalate	100 ug/l	< 10	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 10	< 10

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "--" symbol indicates that analysis was not performed for a given analyte.

843890220

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - April, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-01 910423 FC3463/3484	W MW-02 910423 FC3452/3473	W MW-03 910423 FC3455/3476	W MW-04 910423 FC3460/3481	W MW-05 910423 FC3451/3472	W MW-06 910423 FC3456/3477	W MW-07 910424 FC3462/3483	W MW-08 910423 FC3459/3480	W MW-09 910423 FC3457/3478	W MW-10 910423 FC3461/3482
1,2-Diphenylhydrazine	0.04 ug/l	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 11	< 10	< 10
Fluoranthene	300 ug/l	< 2.2	< 2.2	< 2.2	< 2.2	< 2.3	< 2.2	< 2.3	4.19	< 2.2	< 2.2
Fluorene	300 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	2.11	< 1.9	< 1.9
Hexachlorobenzene	10 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
Hexachlorobutadiene	1 ug/l	< .91	< .91	< .90	< .91	< .96	< .91	< .96	< .99	< .90	< .90
Hexachlorocyclopentadiene	50 ug/l	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 11	< 10	< 10
Hexachloroethane	10 ug/l	< 1.6	< 1.6	< 1.6	< 1.6	< 1.7	< 1.6	< 1.7	< 1.8	< 1.6	< 1.6
Indeno(1,2,3-c,d)pyrene	NA ug/l	< 3.7	< 3.7	< 3.7	< 3.7	< 3.9	< 3.7	< 3.9	< 4.1	< 3.7	< 3.7
Isophorone	100 ug/l	< 2.2	< 2.2	< 2.2	< 2.2	< 2.3	< 2.2	< 2.3	< 2.4	< 2.2	< 2.2
Naphthalene	NA ug/l	< 1.6	< 1.6	< 1.6	< 1.6	< 1.7	< 1.6	107	< 1.8	< 1.6	< 1.6
Nitrobenzene	10 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
N-Nitrosodimethylamine	20 ug/l	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 11	< 10	< 10
N-Nitrosodi-n-propylamine	20 ug/l	< 10	< 10	< 10	< 10	< 11	< 10	< 11	< 11	< 10	< 10
N-Nitrosodiphenylamine	20 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
Phenanthrene	NA ug/l	< 5.5	< 5.5	< 5.4	< 5.5	< 5.7	< 5.5	< 5.7	< 5.9	< 5.4	< 5.4
Pyrene	200 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	4.26	< 1.9	< 1.9
1,2,4-Trichlorobenzene	9 ug/l	< 1.9	< 1.9	< 1.9	< 1.9	< 2.0	< 1.9	< 2.0	< 2.1	< 1.9	< 1.9
Aldrin	0.04 ug/l	-	-	-	-	-	-	-	-	-	-
Alpha-BHC	0.02 ug/l	-	-	-	-	-	-	-	-	-	-
Beta-BHC	0.2 ug/l	-	-	-	-	-	-	-	-	-	-
Gamma-BHC	0.2 ug/l	-	-	-	-	-	-	-	-	-	-
Delta-BHC	NA ug/l	-	-	-	-	-	-	-	-	-	-
Chlordane	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
4,4'-DDT	0.1 ug/l	-	-	-	-	-	-	-	-	-	-
4,4'-DDE	0.1 ug/l	-	-	-	-	-	-	-	-	-	-
4,4'-DDD	0.1 ug/l	-	-	-	-	-	-	-	-	-	-
Dieldrin	0.03 ug/l	-	-	-	-	-	-	-	-	-	-
Endosulfan I	0.4 ug/l	-	-	-	-	-	-	-	-	-	-
Endosulfan II	0.4 ug/l	-	-	-	-	-	-	-	-	-	-
Endosulfan sulfate	0.4 ug/l	-	-	-	-	-	-	-	-	-	-
Endrin	2 ug/l	-	-	-	-	-	-	-	-	-	-
Endrin aldehyde	NA ug/l	-	-	-	-	-	-	-	-	-	-
Heptachlor	0.4 ug/l	-	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	0.2 ug/l	-	-	-	-	-	-	-	-	-	-
Toxaphene	3 ug/l	-	-	-	-	-	-	-	-	-	-

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
The "--" symbol indicates that analysis was not performed for a given analyte.

843890221

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - April, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-01 910423 FC3463/3484	W MW-02 910423 FC3452/3473	W MW-03 910423 FC3455/3476	W MW-04 910423 FC3460/3481	W MW-05 910423 FC3451/3472	W MW-06 910423 FC3456/3477	W MW-07 910424 FC3462/3483	W MW-08 910423 FC3459/3480	W MW-09 910423 FC3457/3478	W MW-10 910423 FC3461/3482
Aroclor 1242	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1254	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1260	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1248	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1232	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1221	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1016	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Groundwater Conventionals											
Chloride	250 mg/l	200	53.8	221	79.7	244	30.4	340	433	69.1	46.9
Sulfate as SO4	250 mg/l	8.3	61.4	13.1	< 5.0	61.4	< 5.0	< 5.0	22.2	167.1	< 5.0
Phenolics, Total	NA mg/l	-	-	-	-	-	-	-	-	-	-
Cyanide, Total	0.2 mg/l	< .025	< .025	< .025	< .025	< .025	< .025	< .025	< .025	< .025	< .025
pH	6.5-8.5 std	6.43	6.73	6.83	6.83	6.72	7	6.13	7.07	7.39	7.06
pH	6.5-8.5 std	6.43	6.73	6.82	6.83	6.72	6.99	5.13	7.07	7.39	7.06
INORGANICS, XYLENES											
Ammonia as N	0.5 mg/l	2.2	4.5	6.8	22	11	2.2	12	5.8	1.2	0.5
Antimony, Total	20 ug/l	-	-	-	-	-	-	-	-	-	-
Arsenic, Total	8 ug/l	-	-	-	-	-	-	-	-	-	-
Beryllium, Total	20 ug/l	-	-	-	-	-	-	-	-	-	-
Cadmium, Total	4 ug/l	-	-	-	-	-	-	-	-	-	-
Chromium, Total	100 ug/l	-	-	-	-	-	-	-	-	-	-
Copper, Total	1000 ug/l	-	-	-	-	-	-	-	-	-	-
Lead, Total	10 ug/l	25	< 5.0	9.5	7.8	< 5.0	7.8	9.7	17	5.8	< 5.0
Lead, Dissolved	10 ug/l	< 10	< 5.0	< 5.0	< 25	6.5	< 5.0	15	< 5.0	< 5.0	15
Mercury, Total	2 ug/l	-	-	-	-	-	-	-	-	-	-
Nickel, Total	100 ug/l	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (IR)	none visible mg/l	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons(heavy)	none visible mg/l	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons(light)	none visible mg/l	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons(medium)	none visible mg/l	-	-	-	-	-	-	-	-	-	-
Selenium, Total	50 ug/l	-	-	-	-	-	-	-	-	-	-
Silver, Total	NA ug/l	-	-	-	-	-	-	-	-	-	-
Sodium, Dissolved	50000 ug/l	109000	43000	142000	172000	144000	40000	110000	467000	67500	38000
Thallium, Total	10 ug/l	-	-	-	-	-	-	-	-	-	-
Total Dissolved Solids (TDS)	500 mg/l	480	720	1390	850	1010	110	1020	2010	720	330
Zinc, Total	5000 ug/l	-	-	-	-	-	-	-	-	-	-
m-Xylene	NA ug/l	< 10	< 10	< 10	2100	< 10	< 10	< 10	< 10	< 10	< 10
o+p-Xylenes	NA ug/l	< 10	< 10	< 10	2230	< 10	< 10	< 10	< 10	< 10	< 10

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890222

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - April, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-11 910424 FC3448/3469	W MW-12 910423 FC3495	W MW-13 910423 FC3705	W MW-14 910423 FC3453/3474	W MW-15 910424 FC3450/3471	W MW-16 910423 FC3496	W MW-17 910423 FC3449/3470			
VOLATILE ORGANICS											
Acrolein	NA ug/l	-	-	-	-	-	-	-	-	-	-
Acrylonitrile	50 ug/l	-	-	-	-	-	-	-	-	-	-
Benzene	1 ug/l	-	-	-	-	-	-	-	-	-	-
bis(Chloromethyl)ether	NA ug/l	-	-	-	-	-	-	-	-	-	-
Bromoform	4 ug/l	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	2 ug/l	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	4 ug/l	-	-	-	-	-	-	-	-	-	-
Chlorodibromomethane	10 ug/l	-	-	-	-	-	-	-	-	-	-
Chloroethane	NA ug/l	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinyl ether	NA ug/l	-	-	-	-	-	-	-	-	-	-
Chloroform	6 ug/l	-	-	-	-	-	-	-	-	-	-
Dichlorobromomethane	1 ug/l	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NA ug/l	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	70 ug/l	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	2 ug/l	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	2 ug/l	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	1 ug/l	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropylene	NA ug/l	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	700 ug/l	-	-	-	-	-	-	-	-	-	-
Methyl bromide	10 ug/l	-	-	-	-	-	-	-	-	-	-
Methyl chloride	30 ug/l	-	-	-	-	-	-	-	-	-	-
Methylene chloride	2 ug/l	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	2 ug/l	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	1 ug/l	-	-	-	-	-	-	-	-	-	-
Toluene	1000 ug/l	-	-	-	-	-	-	-	-	-	-
1,2-Trans-dichloroethylene	100 ug/l	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	30 ug/l	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	3 ug/l	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	1 ug/l	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	NA ug/l	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	5 ug/l	-	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropylene	NA ug/l	-	-	-	-	-	-	-	-	-	-
SEMI-VOLATILE ORG.											
2-Chlorophenol	40 ug/l	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	20 ug/l	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	100 ug/l	-	-	-	-	-	-	-	-	-	-

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890223

Table 4.04.3-1

BASF Corporation: Kearny, New Jersey

ECRA Case #90537

Monitoring Well Data - April, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-11 910424 FC3448/3469	W MW-12 910423 FC3495	W MW-13 910423 FC3705	W MW-14 910423 FC3453/3474	W MW-15 910424 FC3450/3471	W MW-16 910423 FC3496	W MW-17 910423 FC3449/3470			
4,6-Dinitro-o-cresol	NA ug/l	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	40 ug/l	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	NA ug/l	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	NA ug/l	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol	NA ug/l	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	1 ug/l	-	-	-	-	-	-	-	-	-	-
Phenol	4000 ug/l	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	NA ug/l	-	-	-	-	-	-	-	-	-	-
Acenaphthene	400 ug/l	8.22	-	-	< 2.0	30.5	-	< 1.9	-	-	-
Acenaphthylene	NA ug/l	< 3.5	-	-	< 3.6	< 3.7	-	< 3.5	-	-	-
Anthracene	2000 ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9	-	-	-
Benzidine	50 ug/l	< 44	-	-	< 45	< 46	-	< 44	-	-	-
Benzo(a)anthracene	NA ug/l	< 7.9	-	-	< 8.0	< 8.2	-	< 7.9	-	-	-
Benzo(a)pyrene	NA ug/l	< 2.5	-	-	< 2.6	< 2.6	-	< 2.5	-	-	-
Benzo(b)fluoranthene	NA ug/l	< 4.8	-	-	< 4.9	< 5.1	-	< 4.8	-	-	-
Benzo(ghi)perylene	NA ug/l	< 4.1	-	-	< 4.2	< 4.3	-	< 4.1	-	-	-
Benzo(k)fluoranthene	NA ug/l	< 2.5	-	-	< 2.6	< 2.6	-	< 2.5	-	-	-
bis(2-Chloroethoxy)methane	NA ug/l	< 5.4	-	-	< 5.5	< 5.6	-	< 5.4	-	-	-
bis(2-Chloroethyl) ether	10 ug/l	< 5.8	-	-	< 5.9	< 6.0	-	< 5.8	-	-	-
bis(2-Chloroisopropyl)ether	300 ug/l	< 5.8	-	-	< 5.9	< 6.0	-	< 5.8	-	-	-
bis(2-Ethylhexyl)phthalate	30 ug/l	< 10	-	-	< 10	< 11	-	< 10	-	-	-
4-Bromophenyl phenyl ether	NA ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9	-	-	-
Butyl benzyl phthalate	100 ug/l	< 10	-	-	< 10	< 11	-	< 10	-	-	-
2-Chloronaphthalene	NA ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9	-	-	-
4-Chlorophenyl phenyl ether	NA ug/l	< 4.2	-	-	< 4.3	< 4.4	-	< 4.2	-	-	-
Chrysene	NA ug/l	< 2.5	-	-	< 2.6	< 2.6	-	< 2.5	-	-	-
Dibenzo(a,h)anthracene	NA ug/l	< 2.5	-	-	< 2.6	< 2.6	-	< 2.5	-	-	-
1,2-Dichlorobenzene	600 ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9	-	-	-
1,3-Dichlorobenzene	600 ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9	-	-	-
1,4-Dichlorobenzene	75 ug/l	< 4.4	-	-	< 4.5	< 4.6	-	< 4.4	-	-	-
3,3'-Dichlorobenzidine	60 ug/l	< 16.7	-	-	< 17.0	< 17.4	-	< 16.7	-	-	-
Diethyl phthalate	5000 ug/l	< 10	-	-	< 10	< 11	-	< 10	-	-	-
Dimethyl phthalate	NA ug/l	< 10	-	-	< 10	< 11	-	< 10	-	-	-
Di-n-butyl phthalate	NA ug/l	< 10	-	-	< 10	< 11	-	< 10	-	-	-
2,4-Dinitrotoluene	10 ug/l	< 5.8	-	-	< 5.9	< 6.0	-	< 5.8	-	-	-
2,6-Dinitrotoluene	NA ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9	-	-	-
Di-n-octyl phthalate	100 ug/l	< 10	-	-	< 10	< 11	-	< 10	-	-	-

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.

The "-" symbol indicates that analysis was not performed for a given analyte.

843890224

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - April, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-11 910424 FC3448/3469	W MW-12 910423 FC3495	W MW-13 910423 FC3705	W MW-14 910423 FC3453/3474	W MW-15 910424 FC3450/3471	W MW-16 910423 FC3496	W MW-17 910423 FC3449/3470			
1,2-Diphenylhydrazine	0.04 ug/l	< 10	-	-	< 10	< 11	-	< 10			
Fluoranthene	300 ug/l	< 2.2	-	-	< 2.3	2.71	-	< 2.2			
Fluorene	300 ug/l	4.95	-	-	< 2.0	14.6	-	< 1.9			
Hexachlorobenzene	10 ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9			
Hexachlorobutadiene	1 ug/l	< .91	-	-	< .93	< .95	-	< .91			
Hexachlorocyclopentadiene	50 ug/l	< 10	-	-	< 10	< 11	-	< 10			
Hexachloroethane	10 ug/l	< 1.6	-	-	< 1.6	< 1.7	-	< 1.6			
Indeno(1,2,3-c,d)pyrene	NA ug/l	< 3.7	-	-	< 3.8	< 3.9	-	< 3.7			
Isophorone	100 ug/l	< 2.2	-	-	< 2.3	< 2.3	-	< 2.2			
Naphthalene	NA ug/l	< 1.6	-	-	8.82	25.8	-	< 1.6			
Nitrobenzene	10 ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9			
N-Nitrosodimethylamine	20 ug/l	< 10	-	-	< 10	< 11	-	< 10			
N-Nitrosodi-n-propylamine	20 ug/l	< 10	-	-	< 10	< 11	-	< 10			
N-Nitrosodiphenylamine	20 ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9			
Phenanthrene	NA ug/l	< 5.5	-	-	< 5.6	6.77	-	< 5.5			
Pyrene	200 ug/l	< 1.9	-	-	< 2.0	2.21	-	< 1.9			
1,2,4-Trichlorobenzene	9 ug/l	< 1.9	-	-	< 2.0	< 2.0	-	< 1.9			
Aldrin	0.04 ug/l	-	-	-	-	-	-	-			
Alpha-BHC	0.02 ug/l	-	-	-	-	-	-	-			
Beta-BHC	0.2 ug/l	-	-	-	-	-	-	-			
Gamma-BHC	0.2 ug/l	-	-	-	-	-	-	-			
Delta-BHC	NA ug/l	-	-	-	-	-	-	-			
Chlordane	0.5 ug/l	-	-	-	-	-	-	-			
4,4'-DDT	0.1 ug/l	-	-	-	-	-	-	-			
4,4'-DDE	0.1 ug/l	-	-	-	-	-	-	-			
4,4'-DDD	0.1 ug/l	-	-	-	-	-	-	-			
Dieldrin	0.03 ug/l	-	-	-	-	-	-	-			
Endosulfan I	0.4 ug/l	-	-	-	-	-	-	-			
Endosulfan II	0.4 ug/l	-	-	-	-	-	-	-			
Endosulfan sulfate	0.4 ug/l	-	-	-	-	-	-	-			
Endrin	2 ug/l	-	-	-	-	-	-	-			
Endrin aldehyde	NA ug/l	-	-	-	-	-	-	-			
Heptachlor	0.4 ug/l	-	-	-	-	-	-	-			
Heptachlor epoxide	0.2 ug/l	-	-	-	-	-	-	-			
Toxaphene	3 ug/l	-	-	-	-	-	-	-			

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
The "--" symbol indicates that analysis was not performed for a given analyte.

843890225

Table 4.04.3-1
BASF Corporation: Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - April, 1991

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	W MW-11 910424 FC3448/3469	W MW-12 910423 FC3495	W MW-13 910423 FC3705	W MW-14 910423 FC3453/3474	W MW-15 910424 FC3450/3471	W MW-16 910423 FC3496	W MW-17 910423 FC3449/3470			
Aroclor 1242	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1254	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1260	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1248	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1232	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1221	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Aroclor 1016	0.5 ug/l	-	-	-	-	-	-	-	-	-	-
Groundwater Conventionals											
Chloride	250 mg/l	149	-	-	201	31.8	-	144			
Sulfate as SO4	250 mg/l	< 5.0	-	-	< 5.0	< 5.0	-	6.1			
Phenolics, Total	NA mg/l	-	-	-	-	-	-	-			
Cyanide, Total	0.2 mg/l	< .025	-	-	< .025	< .025	-	< .025			
pH	6.5-8.5 std	6.27	-	-	8.25	6.44	-	6.63			
pH	6.5-8.5 std	6.27	-	-	8.25	6.44	-	6.62			
INORGANICS, XYLENES											
Ammonia as N	0.5 mg/l	3.6	-	-	4.7	61	-	3			
Antimony, Total	20 ug/l	-	-	-	-	-	-	-			
Arsenic, Total	8 ug/l	-	-	-	-	-	-	-			
Beryllium, Total	20 ug/l	-	-	-	-	-	-	-			
Cadmium, Total	4 ug/l	-	-	-	-	-	-	-			
Chromium, Total	100 ug/l	-	-	-	-	-	-	-			
Copper, Total	1000 ug/l	-	-	-	-	-	-	-			
Lead, Total	10 ug/l	< 5.0	-	-	21	6.3	-	9.9			
Lead, Dissolved	10 ug/l	< 5.0	-	-	21	< 5.0	-	< 5.0			
Mercury, Total	2 ug/l	-	-	-	-	-	-	-			
Nickel, Total	100 ug/l	-	-	-	-	-	-	-			
Petroleum Hydrocarbons (IR)	none visible mg/l	-	-	-	-	-	-	-			
Petroleum Hydrocarbons(heavy)	none visible mg/l	-	< 24100000	< 24000000	-	-	10100000	-			
Petroleum Hydrocarbons(light)	none visible mg/l	-	< 4900000	36800000	-	-	580000	-			
Petroleum Hydrocarbons(medium)	none visible mg/l	-	42400000	21200000	-	-	91000	-			
Selenium, Total	50 ug/l	-	-	-	-	-	-	-			
Silver, Total	NA ug/l	-	-	-	-	-	-	-			
Sodium, Dissolved	50000 ug/l	96000	-	-	234000	59400	-	73900			
Thallium, Total	10 ug/l	-	-	-	-	-	-	-			
Total Dissolved Solids (TDS)	500 mg/l	540	-	-	930	720	-	610			
Zinc, Total	5000 ug/l	-	-	-	-	-	-	-			
m-Xylene	NA ug/l	< 10	-	-	< 10	< 10	-	< 10			
o+p-Xylenes	NA ug/l	< 10	-	-	< 10	< 10	-	< 10			

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect. The symbol is followed by the detection limit.
The "-" symbol indicates that analysis was not performed for a given analyte.

843890226

Phase II

A groundwater sample was collected from monitoring well MW19 on August 18, 1993. The analyses conducted for the MW19 event included VO+15, BNA+15, Pesticides, PCB, TPH, PP Metals, Chlorides, Sulfates, Phenolics, Ammonia, Cyanide, TDS, and Dissolved Lead.

A summary of the analytical results are provided below:

Volatile Organic Chemicals

The concentrations of benzene and methylene chloride exceeded NJDEPE Criteria, however the trip blank indicated a concentration of methylene chloride in excess of that found in the sample. As with the Phase I results, a number of compounds had laboratory reporting limits which exceeded the NJDEPE Criteria.

Semi-Volatile Organic Compounds

The only SVOC which exceeded laboratory reporting limits was Aroclor 1242. Several other compounds had laboratory reporting limits in excess of NJDEPE Criteria.

Groundwater Conventionals and Inorganics and Xylenes

Chloride, total chromium, total lead and total dissolved solids exceeded NJDEPE Criteria. Some analytes had laboratory reporting limits which exceeded NJDEPE Criteria.

Phase II groundwater analytical results for MW19 are presented in Table 4.04.3-2.

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	MW-19 930818 DBK200	MW-19-FB 930818 DBK201	MW-19-TB 930818 DBK202	MW-19 930818 DBK203	MW-19-FB 930818 DBK204
VOLATILE ORGANICS						
Acrolein	NA ug/l	< 100	< 100	< 100	-	-
Acrylonitrile	50 ug/l	< 100	< 100	< 100	-	-
Benzene	1 ug/l	5.17	< 4.4	< 4.4	-	-
bis(Chloromethyl)ether	NA ug/l	< 10	< 10	< 10	-	-
Bromoform	4 ug/l	< 4.7	< 4.7	< 4.7	-	-
Carbon tetrachloride	2 ug/l	< 2.8	< 2.8	< 2.8	-	-
Chlorobenzene	4 ug/l	< 6.0	< 6.0	< 6.0	-	-
Chlorodibromomethane	10 ug/l	< 3.1	< 3.1	< 3.1	-	-
Chloroethane	NA ug/l	< 10	< 10	< 10	-	-
2-Chloroethylvinyl ether	NA ug/l	< 10	< 10	< 10	-	-
Chloroform	6 ug/l	< 1.6	< 1.6	< 1.6	-	-
Dichlorobromomethane	1 ug/l	< 2.2	< 2.2	< 2.2	-	-
Dichlorodifluoromethane	NA ug/l	< 10	< 10	< 10	-	-
1,1-Dichloroethane	70 ug/l	< 4.7	< 4.7	< 4.7	-	-
1,2-Dichloroethane	2 ug/l	< 2.8	< 2.8	< 2.8	-	-
1,1-Dichloroethylene	2 ug/l	< 2.8	< 2.8	< 2.8	-	-
1,2-Dichloropropane	1 ug/l	< 6.0	< 6.0	< 6.0	-	-
cis-1,3-Dichloropropylene	NA ug/l	< 5.0	< 5.0	< 5.0	-	-
Ethylbenzene	700 ug/l	< 7.2	< 7.2	< 7.2	-	-
Methyl bromide	10 ug/l	< 10	< 10	< 10	-	-
Methyl chloride	30 ug/l	< 10	< 10	< 10	-	-
Methylene chloride	2 ug/l	5.41	< 2.8	7.01	-	-
1,1,2,2-Tetrachloroethane	2 ug/l	< 6.9	< 6.9	< 6.9	-	-
Tetrachloroethylene	1 ug/l	< 4.1	< 4.1	< 4.1	-	-
Toluene	1000 ug/l	< 6.0	< 6.0	< 6.0	-	-
1,2-Trans-dichloroethylene	100 ug/l	< 1.6	< 1.6	< 1.6	-	-
1,1,1-Trichloroethane	30 ug/l	< 3.8	< 3.8	< 3.8	-	-
1,1,2-Trichloroethane	3 ug/l	< 5.0	< 5.0	< 5.0	-	-
Trichloroethylene	1 ug/l	< 1.9	< 1.9	< 1.9	-	-
Trichlorofluoromethane	NA ug/l	< 10	< 10	< 10	-	-
Vinyl chloride	5 ug/l	< 10	< 10	< 10	-	-
trans-1,3-Dichloropropylene	NA ug/l	< 10	< 10	< 10	-	-
SEMI-VOLATILE ORG.						
2-Chlorophenol	40 ug/l	< 3.4	< 3.7	-	-	-
2,4-Dichlorophenol	20 ug/l	< 2.8	< 3.0	-	-	-
2,4-Dimethylphenol	100 ug/l	< 2.8	< 3.0	-	-	-
4,6-Dinitro-o-cresol	NA ug/l	< 24	< 27	-	-	-
2,4-Dinitrophenol	40 ug/l	< 43	< 47	-	-	-
2-Nitrophenol	NA ug/l	< 3.7	< 4.0	-	-	-
4-Nitrophenol	NA ug/l	< 2.4	< 2.7	-	-	-
p-Chloro-m-cresol	NA ug/l	< 3.1	< 3.4	-	-	-
Pentachlorophenol	1 ug/l	< 3.7	< 4.0	-	-	-
Phenol	4000 ug/l	36.9	< 1.7	-	-	-
2,4,6-Trichlorophenol	NA ug/l	< 2.8	< 3.0	-	-	-
Acenaphthene	400 ug/l	< 1.9	< 2.1	-	-	-
Acenaphthylene	NA ug/l	< 3.6	< 3.9	-	-	-
Anthracene	2000 ug/l	< 1.9	< 2.1	-	-	-
Benzidine	50 ug/l	< 45	< 49	-	-	-
Benzo(a)anthracene	NA ug/l	< 8.0	< 8.8	-	-	-
Benzo(a)pyrene	NA ug/l	< 2.6	< 2.8	-	-	-
Benzo(b)fluoranthene	NA ug/l	< 4.9	< 5.4	-	-	-
Benzo(ghi)perylene	NA ug/l	< 4.2	< 4.6	-	-	-
Benzo(k)fluoranthene	NA ug/l	< 2.6	< 2.8	-	-	-
bis(2-Chloroethoxy)methane	NA ug/l	< 5.4	< 6.0	-	-	-

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect.
 The "-" symbol indicates that analysis was not performed for a given analyte.

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - MW-19*

Table 4.04.3-2

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	MW-19 930818 DBK200	MW-19-FB 930818 DBK201	MW-19-TB 930818 DBK202	MW-19 930818 DBK203	MW-19-FB 930818 DBK204
bis(2-Chloroethyl) ether	10 ug/l	< 5.8	< 6.4	-	-	-
bis(2-Chloroisopropyl)ether	300 ug/l	< 5.8	< 6.4	-	-	-
bis(2-Ethylhexyl)phthalate	30 ug/l	< 10	< 11	-	-	-
4-Bromophenyl phenyl ether	NA ug/l	< 1.9	< 2.1	-	-	-
Butyl benzyl phthalate	100 ug/l	< 10	< 11	-	-	-
2-Chloronaphthalene	NA ug/l	< 1.9	< 2.1	-	-	-
4-Chlorophenyl phenyl ether	NA ug/l	< 4.3	< 4.7	-	-	-
Chrysene	NA ug/l	< 2.6	< 2.8	-	-	-
Dibenzo(a,h)anthracene	NA ug/l	< 2.6	< 2.8	-	-	-
1,2-Dichlorobenzene	600 ug/l	< 1.9	< 2.1	-	-	-
1,3-Dichlorobenzene	600 ug/l	< 1.9	< 2.1	-	-	-
1,4-Dichlorobenzene	75 ug/l	< 4.5	< 4.9	-	-	-
3,3'-Dichlorobenzidine	60 ug/l	< 16.8	< 18.5	-	-	-
Diethyl phthalate	5000 ug/l	< 10	< 11	-	-	-
Dimethyl phthalate	NA ug/l	< 5.1	< 5.6	-	-	-
Di-n-butyl phthalate	NA ug/l	< 10	< 11	-	-	-
2,4-Dinitrotoluene	10 ug/l	< 5.8	< 6.4	-	-	-
2,6-Dinitrotoluene	NA ug/l	< 1.9	< 2.1	-	-	-
Di-n-octyl phthalate	100 ug/l	< 10	< 11	-	-	-
1,2-Diphenylhydrazine	0.04 ug/l	< 10	< 11	-	-	-
Fluoranthene	300 ug/l	< 2.2	< 2.5	-	-	-
Fluorene	300 ug/l	< 1.9	< 2.1	-	-	-
Hexachlorobenzene	10 ug/l	< 1.9	< 2.1	-	-	-
Hexachlorobutadiene	1 ug/l	< .92	< 1.0	-	-	-
Hexachlorocyclopentadiene	50 ug/l	< 10	< 11	-	-	-
Hexachloroethane	10 ug/l	< 1.6	< 1.8	-	-	-
Indeno(1,2,3-c,d)pyrene	NA ug/l	< 4.8	< 5.3	-	-	-
Isophorone	100 ug/l	< 2.2	< 2.5	-	-	-
Naphthalene	NA ug/l	4.07	< 1.8	-	-	-
Nitrobenzene	10 ug/l	< 1.9	< 2.1	-	-	-
N-Nitrosodimethylamine	20 ug/l	< 10	< 11	-	-	-
N-Nitrosodi-n-propylamine	20 ug/l	< 10	< 11	-	-	-
N-Nitrosodiphenylamine	20 ug/l	< 1.9	< 2.1	-	-	-
Phenanthrone	NA ug/l	< 5.5	< 6.1	-	-	-
Pyrene	200 ug/l	< 1.9	< 2.1	-	-	-
1,2,4-Trichlorobenzene	9 ug/l	< 1.9	< 2.1	-	-	-
Aldrin	0.04 ug/l	< .052	< .052	-	-	-
Alpha-BHC	0.02 ug/l	< .052	< .052	-	-	-
Beta-BHC	0.2 ug/l	< .052	< .052	-	-	-
Gamma-BHC	0.2 ug/l	< .052	< .052	-	-	-
Delta-BHC	NA ug/l	< .052	< .052	-	-	-
Chlordane	0.5 ug/l	< 1.0	< 1.0	-	-	-
4,4'-DDT	0.1 ug/l	< .10	< .10	-	-	-
4,4'-DDE	0.1 ug/l	< .10	< .10	-	-	-
4,4'-DDD	0.1 ug/l	< .10	< .10	-	-	-
Dieldrin	0.03 ug/l	< .10	< .10	-	-	-
Endosulfan I	0.4 ug/l	< .052	< .052	-	-	-
Endosulfan II	0.4 ug/l	< .10	< .10	-	-	-
Endosulfan sulfate	0.4 ug/l	< .10	< .10	-	-	-
Endrin	2 ug/l	< .10	< .10	-	-	-
Endrin aldehyde	NA ug/l	< .10	< .10	-	-	-
Heptachlor	0.4 ug/l	< .052	< .052	-	-	-
Heptachlor epoxide	0.2 ug/l	< .052	< .052	-	-	-
Toxaphene	3 ug/l	< 2.1	< 2.1	-	-	-

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect.
The "--" symbol indicates that analysis was not performed for a given analyte.

843890229

*BASF Corporation
Kearny, New Jersey
ECRA Case #90537
Monitoring Well Data - MW-19*

Table 4.04.3-2

SAMPLE ID DATE LAB ID	NJDEPE - Higher of PQLs and Ground Water Quality Criteria	MW-19 930818 DBK200	MW-19-FB 930818 DBK201	MW-19-TB 930818 DBK202	MW-19 930818 DBK203	MW-19-FB 930818 DBK204
Aroclor 1242	0.5 ug/l	28.8	< .52	-	-	-
Aroclor 1254	0.5 ug/l	< 1.0	< 1.0	-	-	-
Aroclor 1260	0.5 ug/l	< 1.0	< 1.0	-	-	-
Aroclor 1248	0.5 ug/l	< .52	< .52	-	-	-
Aroclor 1232	0.5 ug/l	< .52	< .52	-	-	-
Aroclor 1221	0.5 ug/l	< .52	< .52	-	-	-
Aroclor 1016	0.5 ug/l	< .52	< .52	-	-	-
Groundwater Conventionals						
Chloride	250 mg/l	399	< 1.0	-	-	-
Sulfate as SO4	250 mg/l	< 5.0	< 5.0	-	-	-
Phenolics, Total	NA mg/l	1.62	< .05	-	-	-
Cyanide, Total	0.2 mg/l	< .025	< .025	-	-	-
INORGANICS, XYLENES						
Ammonia as N	0.5 mg/l	16	< .05	-	-	-
Antimony, Total	20 ug/l	< 60	< 60	-	-	-
Arsenic, Total	8 ug/l	< 50	< 10	-	-	-
Beryllium, Total	20 ug/l	< 1.0	< 1.0	-	-	-
Cadmium, Total	4 ug/l	< 5.0	< 5.0	-	-	-
Chromium, Total	100 ug/l	450	< 10	-	-	-
Copper, Total	1000 ug/l	24	< 10	-	-	-
Lead, Total	10 ug/l	43	< 45	-	-	-
Lead, Dissolved	10 ug/l	-	-	-	< 45	< 45
Mercury, Total	2 ug/l	0.79	< .20	-	-	-
Nickel, Total	100 ug/l	45	< 20	-	-	-
Petroleum Hydrocarbons (IR)	none visible mg/l	3.4	< 1.1	-	-	-
Selenium, Total	50 ug/l	< 25	< 5.0	-	-	-
Silver, Total	NA ug/l	< 10	< 10	-	-	-
Total Dissolved Solids (TDS)	500 mg/l	7340	426	-	-	-
Thallium, Total	10 ug/l	< 10	< 10	-	-	-
Zinc, Total	5000 ug/l	110	27	-	-	-

Notes:

Results preceded by a "<" symbol indicate that the result is a non-detect.
The "—" symbol indicates that analysis was not performed for a given analyte.

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4.04.4 Ongoing LNAPL Recovery Program

During the April 1991 ground water sampling event, samples of LNAPL were taken from monitoring wells MW-12, MW-13, and MW-16 for characterization purposes. Analytical results characterized the LNAPL as 95% BIS. This spurred the development of a test pit program.

During Phase I, O'Brien & Gere Engineers conducted a test pit program at the Kearny facility to initiate the delineation of LNAPL present on the ground water table. A total of 46 test pits were excavated at various locations throughout the facility. During the excavation of the test pits evidence of LNAPL and soil staining was observed as well as areas of debris consisting of corrugated piping, brick, refuse, tires, railroad ties, concrete rubble and polystyrene. LNAPL was observed as a sheen in the majority of the test pits. Upon completion of the test pit program the excavations were backfilled with the original excavated material.

Phase II of the program was developed to be field dependent and flexible due to the immobile nature of the LNAPL, the inconsistent subsurface conditions and the minimal gradient. An evaluation of ground water remedial alternatives was performed based on historical site conditions, a literature review and O'Brien & Gere Engineer's past experience in this area. This evaluation showed that a well pumping system would not be practical and that a trenching system would be best suited for the site.

During Phase II a total of 43 trenches were excavated to 1 foot below the ground water level at locations throughout the site. The soil excavated from each trench

was stockpiled upgradient from the trench to allow for any runoff from a rainfall event to flow back into the original trench. The composition of the soils was as documented in earlier reports and consisted mostly of a coarse grained sand with areas of debris and construction materials. In order to stabilize the sidewalls and facilitate collection of LNAPL perforated metal collection sumps were installed in 4 trenches.

The trenches were skimmed with a wet-vac into a steel 500-gallon storage tank. The LNAPL was then transferred into 55-gallon drums and labeled for disposal.

The trenches were inspected on a weekly basis for amount of LNAPL as well as other parameters including time, water level below grade and high and low tidal information. If after a period of two weeks, no recoverable amounts of LNAPL were present in a trench then that trench was backfilled with the original soil. As the LNAPL recovery program was not intended for the cleanup of contaminated soils no soils were stockpiled or characterized for disposal. The cleanup of the soils will be addressed in Section 5 - Remedial Alternative Analysis and Cleanup Plan.

To-date approximately 121 gallons of LNAPL have been collected from sources of LNAPL collection not limited only to the trenches installed. LNAPL was also collected from monitoring wells MW-12, MW-13, and MW-16, various storm sewer manholes and sump K12.

The inspection and collection activities for the LNAPL recovery program are still in operation. BASF is concurrently reviewing alternatives for a more dynamic recovery through the pumping and collection of LNAPL. Upon completion of the LNAPL recovery program, BASF will submit a report to the NJDEPE documenting the results of the program.

4.04.5 Tidal Study

This section discusses the results of the tidal study conducted at the BASF Kearny site between May 28, 1993 and June 9, 1993. Included herein are discussions of the effects on pressure head fluctuation from precipitation and tidal cycles.

The focus of this discussion is centered around the peak of precipitation at 1:50 a.m. on June 1, 1993. The following assessment is based upon placing Fig 4.04.5 over any of the corresponding pressure head graphs in Attachment 3 for the time period from May 31, 1993 (12 am) to June 2, 1993 (12 am).

The lag period between the peak of precipitation and the highest pressure head in each well is approximately four hours. This delay is primarily due to permeability qualities of the soil. Although high tide occurs shortly after the precipitation event, the impact of tidal change on pressure head appears minimal and the highest pressure head is primarily due to the precipitation event.

Since the tidal data used for this study was taken from The Narrows, N.Y. Harbor, high tide at the BASF Kearny site occurs approximately 40 minutes after high tide at The Narrows. The 40 minute lag does not alter our graphs in any appreciable manner due to the extensive time span of the study.